CITY COUNCIL MEETING
May 28, 1991

DEVELOPMENT IMPACT FEES

CC-6
CC-46
CC-56

Notice of this meeting was published according to law, an affidavit of which is on file in the City Clerk's office. The subject of the this meeting, "Development Impact Fees", was introduced by City Manager Peterson and Public Works Director Ronsko. Mr. Ronsko then introduced representatives of Nolte & Associates and Angus McDonald & Associates. The presentation consisted of the following segments:

DEVELOPMENT IMPACT FEE PRESENTATION

Overview
(by City staff)

Fee Calculation Procedure
Cash Flow Analysis
AB 1600 Requirements
Program Administration
(by McDonald & Associates)

Water
Sewer
Storm Drainage
Streets & Roads
(by Nolte & Associates)

Police
Fire
Parks & Recreation
General City Facilities
(by McDonald & Associates)

Summary of Total Fees
Total City Fees
Comparison With Other Cities
Past Funding Sources
(by City staff)

The following persons addressed the City Council regarding the matter:

a) Terry Piazza, Baumbach & Piazza, 323 West Elm Street, Lodi;

b) Steve Pechin, Baumbach & Piazza, 323 West Elm Street, Lodi;

c) Dennis Bennett, 1711 Coventry Way, Lodi;

d) Jeff Kirst, 314 West Lockeford Street, Lodi; and

e) Bill Mitchell, 4870 Gerber Road, Sacramento, California.

There being no other persons wishing to speak, the public portion of the meeting was closed.

A lengthy discussion followed with the City Council asking staff to respond to the numerous points that were raised in this discussion. It was agreed that another meeting of this type will be held by the City Council in the near future.

DECLARATION OF MAILING

On May 2, 1991 in the City of Lodi, San Joaquin County, California, I deposited in the United States mail, envelopes with first-class postage prepaid thereon, containing a copy of the Notice attached hereto, marked Exhibit "A"; said envelopes were addressed as is more particularly shown on Exhibit "B" attached hereto.

There is a regular daily communication by mail between the City of Lodi, California, and the places to which said envelopes were addressed.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on May 2, 1991, at Lodi, California.

Alice M. Reimche
City Clerk

Jennifer M. Perrin
Deputy City Clerk

DEC/01
TXTA.FRM

NOTICE OF PUBLIC HEARING
REGARDING DEVELOPMENT IMPACT FEES

NOTICE IS HEREBY GIVEN that on Tuesday, May 28, 1991 at the hour of 7:00 a.m., or as soon thereafter as the matter may be heard, the Lodi City Council will conduct a Public Hearing at the Carnegie Forum, 305 West Pine Street, Lodi CA, to hear the following matter:

a) Development Impact Fees - those fees charged to development for construction of capital facilities.

All interested persons are invited to present their views and comments on this matter. Written statements may be filed with the City Clerk at any time prior to the hearing scheduled herein and oral statements may be made at said hearing.

If you challenge the subject matter in court, you may be limited to raising only those issues you or someone else raised at the Public Hearing described in this notice, or in written correspondence delivered to the City Clerk, 221 West Pine Street, Lodi, California, at or prior to, the City Public Hearing.

Dated: May 1, 1991

By Order of the Lodi City Council

Jennifer M. Perrin
for Alice M. Reimche
City Clerk

Approved as to form:
B W McNatt
Bobby W. McNatt
City Attorney

DRAFT IMPACT FEE MAILING LIST 4/17/91
S = Summary Table & Letter
F = Full Study & Letter

S THE GIANNONI ORGANIZATION
1420 S MILLS AVE #E
LODI, CA 95242

S LODI DEVELOPMENT INC
PO BOX 1237
LODI, CA 95241

F BOB MORRIS
222 W LOCKEFORD ST #9
LODI, CA 95240

S JERRY HEMINGER
619 WILLOW GLEN DR
LODI, CA 95240

S WENTLAND-SNIDER
521 S HAM LN #A
LODI, CA 95242

F FRED BAKER
317 W LODI AVE
LODI, CA 95240

F RON THOMAS
PO BOX 1505
LODI, CA 95240

F BENNETT & COMPTON
PO BOX 1597
LODI, CA 95241

S GOODEN CONSTRUCTION
114A N CHURCH ST
LODI, CA 95240

S H&M BUILDERS
330 S FAIRMONT AVE
LODI, CA 95240

S VERNER CONSTRUCTION
2707 E FREMONT ST #17
STOCKTON, CA 95205

S FHA PROPERTIES
3158 AUTO CENTER CIR #E
STOCKTON, CA 95212

S TED KATZAKIAN
777 S HAM LN
LODI, CA 95242

F DARYL GEWEKE
PO BOX 1210
LODI, CA 95241

S JW PROPERTIES
3515 COUNTRY CLUB BLVD
STOCKTON, CA 95240

S GRUPE DEVELOPMENT
4041 W BROOKSIDE RD
STOCKTON, CA 95207

F JEFF KIRST
120 N PLEASANT
LODI, CA 95240

S SURLAND PROPERTIES
88 HOWARD ST
SAN FRANCISCO, CA 94105

F BAUMBACH-PIAZZA
323 W ELM ST
LODI, CA 95240

F DILLON ENGINEERING
PO BOX 2180
LODI, CA 95241

F RW SIEGFRIED & ASSOCIATES
4045 CORONADO AVE
STOCKTON, CA 95204

S THOMPSON-HYSELL ENGINEERS
1016 12TH ST
MODESTO, CA 95354

F PHILLIPPI ENGINEERING
595 BUCK AVE
VACAVILLE, CA 95688

S BEARDSLEE DEVELOPMENT
110 GRAND AVE
CAPITOLA, CA 95010

S JIM GIOTTONINI
425 N EL DORADO
STOCKTON, CA 95203

S HENRY HIRATA
PO BOX 1810
STOCKTON, CA 95201

F STOCKTON RECORD
PO BOX 900
STOCKTON, CA 95201

F LODI NEWS SENTINEL
125 N CHURCH ST
LODI, CA 95240

F RILEY-PEARLMAN
11640 SAN VICENTE BLVD #202
LOS ANGELES, CA 90049

F BROWMAN DEVELOPMENT
1900 EMBARCADERO #201
OAKLAND, CA 94606

LIBRARY

JAMES GRIFFITH
1020 BRADFORD CIR
LODI, CA 95240

SUSAN HITCHCOCK
615 S HUTCHINS ST
LODI, CA 95240

CRAIG RASMUSSEN
PO BOX 560
LODI, CA 95241

ROGER STAFFORD
801 S MILLS AVE
LODI, CA 95240

MICHAEL LAPENTA
1718 EDGEWOOD DR
LODI, CA 95240

HARRY MARZOLF
445 MADRONE CT
LODI, CA 95242

LARRY MINDT
PO BOX 782
LODI, CA 95241

HAWAII-SAN FRANCISCO
2200 POWELL ST #1025
EMERYVILLE, CA 94608

CAMRAY DEVELOPMENT
7919 FOLSOM BLVD #320
SACRAMENTO, CA 95826

ROBERT BATCH
1819 S CHEROKEE LN #67
LODI, CA 95240

DELMAR BATCH
1767 E HARNEY LN
LODI, CA 95240

BRUCE TOWNE
PO BOX 185
WALNUT GROVE, CA 95690

WENELL MATTHEIS BOWE
222 W LOCKEFORD ST #9
LODI, CA 95240

BUILDING INDUSTRY ASSN.
777 N PERSHING #2C
STOCKTON, CA 95203

LOWELL FLEMMER
818 GREENWOOD DR
LODI, CA 95240

MIKE PEPPAS
16109 N MOORE RD
LODI, CA 95242

[redacted]

Ramsay Prader
4 S. Central Ct
Stln CA 95204
F

[redacted]

[redacted]

MIKE SMITH
VIC MEYER ENG. ASSOC
PO BOX 611
LODI, CA 95241

ROB RODRIGUEZ
SAN JOAQUIN CO.
PUBLIC WORKS
P.O. BOX 1010
STOCKTON, CA 95201

Development Impact Fee Presentation

Overview
City Staff

Fee Calculation Procedure
Cash Flow Analysis
AB 1600 Requirements
Program Administration
McDonald & Associates

Water
Sewer
Storm Drainage
Streets & Roads
Nolte & Associates

Police
Fire
Parks & Recreation
General City Facilities
McDonald & Associates

Summary of Total Fees
Total City Fees
Comparison With Other Cities
Past Funding Sources
City Staff

Development Impact Fees

Fee Calculation Procedure

Determine Service Area
General Plan Boundary

Establish Levels of Service
Existing Conditions

Determine Improvements to Meet Service Standard with New Growth
Capital Improvement List

Estimate Cost and Timing of Improvements
Capital Improvement List/Schedule

Identify Existing Deficiencies
Separate Analysis on Certain Projects

Determine Relative Service Demand of Various Land Uses
RAE (Residential Acre Equivalent) Schedule

Calculate Fee
Cost of Improvements/RAE's plus Cash Flow Analysis

Development Impact Fees

Cash Flow Analysis

Annual Revenue
Annual Expenses
Account for Interest

(either earned on fund balance or paid on loans)

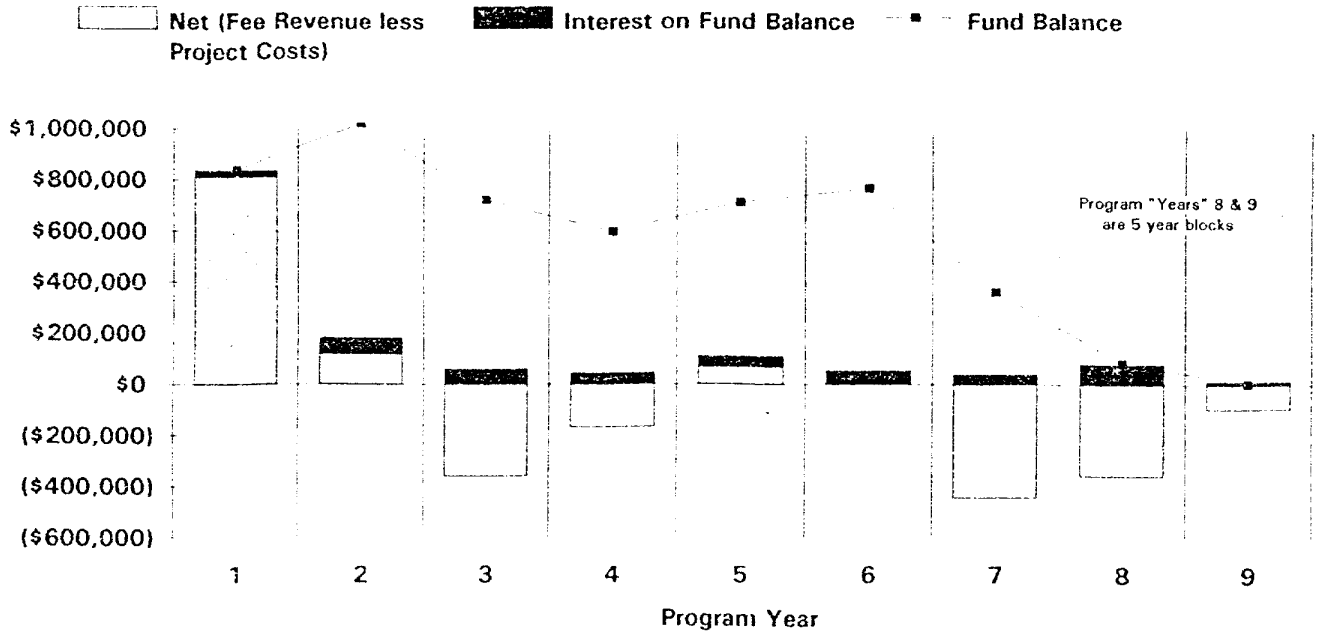
Interfund Borrowing

Examples

Water - no borrowing

Sewer - borrowing

Water Impact Fee
Cash Flow



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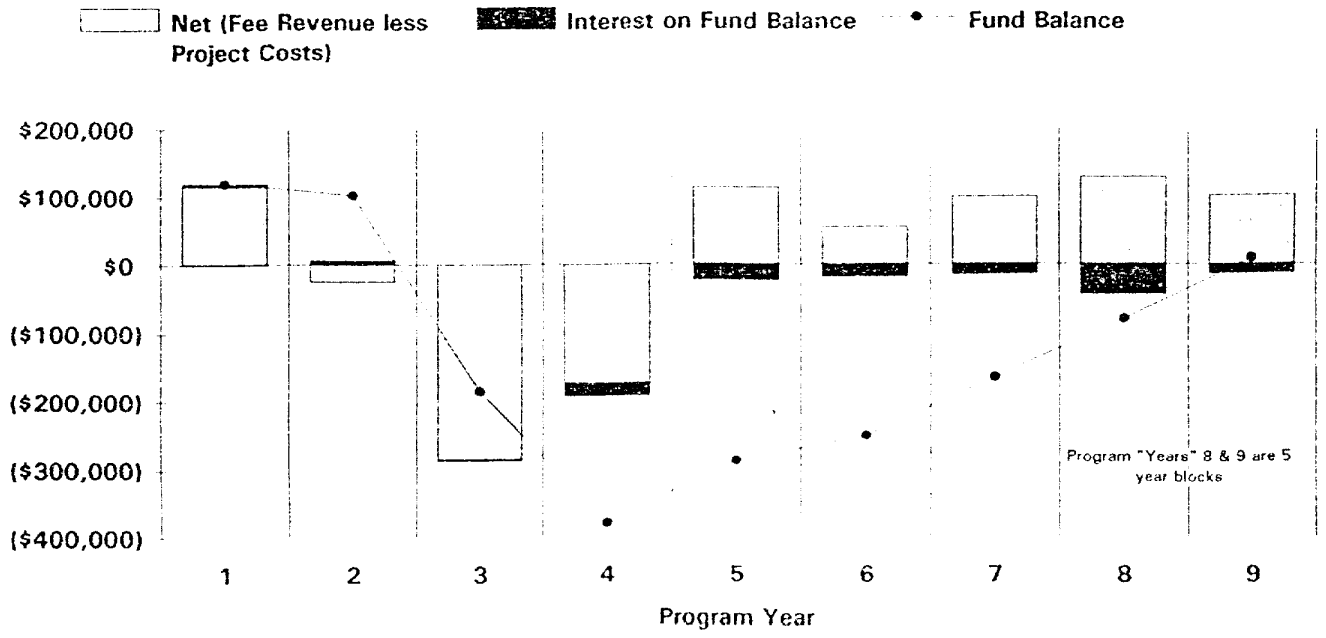
Sewer Impact Fee
Cash Flow



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Development Impact Fees

AB1600 Requirements/ Program Administration

Separate Funds

Account for Interest

Annual Reporting

Minor Adjustments/Updates

Major Updates - General Plan

Fee Collection

Record Keeping

Development Impact Fees

Water

Projects Included

Master Plan
Current plan plus updates

Admin. Bldg./Corporation Yard
50/50 split with Sewer, portion w/Electric Utility

Oversize Mains & Major Crossings
10" and larger mains, major crossings per present practice
Will credit individual projects with portion of cost

Water Wells
All new wells to accomodate growth
Includes GAC filters in certain areas and standby power per Master Plan

Water Tank
Portion providing capacity for new growth (31%)

Total Cost
$9,263,525

Projects Not Included

Replacements/Reinforcements of Existing Mains
Generally improvements to distributions system in older areas
Miscellaneous Fire Protection Improvements

Total Cost
$1,628,000

Development Impact Fees

Sewer

Projects Included

Master Plan
Current plan plus updates

Admin. Bldg./Corporation Yard
50/50 split with Water, portion w/Electric Utility

Oversize Mains
12" and larger mains
Will credit individual projects with portion of cost

Lift Stations
In separate areas of benefit
Includes force mains
$639,500 not included below

Total Cost
$1,368,920

Projects Not Included

Replacements/Reinforcements of Existing Mains
Generally improvements to collection system in older areas

Total Cost
$1,005,500

Note: Wastewater treatment plant covered by existing separate fee

Development Impact Fees

Storm Drainage

Projects Included

Master Plan
Current plan plus updates

Basins
Per Master Plan, including pump stations
Approx. 1 acre per new basin in Parks Fee

Trunk Lines
30" & larger per Master Plan

Total Cost
$15,773,000

Projects Not Included

Replacements/Reinforcements of Existing Mains
Generally improvements to collection system in older areas

Total Cost
$1,051,000

Development Impact Fees

Streets & Roads

Projects Included

Master Plan

Current plan plus updates

Widenings & capacity improvements to existing streets

Kettleman Lane, Lower Sacramento Road, Lodi Avenue
Lockeford Street, Victor Road

"Oversized" New Streets

Credit on R/W & construction cost of portion over 68 feet in width
Harney Lane, Century Boulevard, Guild Avenue, Turner Road

Improvements @ Hwy 12, 99

12/99 Interchange, Turner Road Overpass

Traffic Signals

New signals identified in Circulation Plan
50% of signals already meeting warrants

Miscellaneous Projects

WID box culverts
Railroad crossing improvements

Recent Capacity Improvement Projects

Portion of project attributable to capacity increase
Adjusted downward for capacity used between project construction and present

Total Cost

$15,290,687

Projects Not Included

Reconstructions of existing streets

Street Maintenance
State, Federal & Measure K funding

Total Cost

$14,893,513 General Fund (maintenance)
$16,010,250 Other funding

Development Impact Fees

Police

Projects Included

Police Station Expansion
10,000 SF, 10 jail cells

Equipment
Personal equipment for 29 officers
8 patrol cars (equipped)
2 pickup trucks (equipped)
Animal control truck
Radios
Computer terminals

Total Cost
$2,430,000

Projects Not Included

Upgrades of existing systems
Proposed computer aided dispatch system

Development Impact Fees

Fire

Projects Included

Westside Station
Lower Sacramento Road N/Elm Street
Station equipment
Personal equipment for 23 employees

Equipment
Ladder truck
2 sedans
2 minivans
Computer terminals

Station 1 (Downtown)
Minor Remodel

Total Cost
$1,065,000

Projects Not Included

Equipment Replacements
Truck & engine replacements

Total Cost
$1,090,000

Development Impact Fees

Parks & Recreation

Projects Included

Master Plan
To Refine Needs, Projects and Estimates

Admin. Bldg./Corporation Yard
@ 45% per deficiency analysis

New "Standard" Parks
Per Table 9-1, 83 acres
Playground Equipment & Ball Diamonds
One New Pool

New Community Buildings
Total 44,000 SF, unspecified locations

Total Cost
$18,740,000

Projects Not Included

Admin. Bldg./Corporation Yard
@ 55% per deficiency analysis

Replacements of Equipment & Enhancements at Developed Parks
Lodi Lake (except West side 13 acre expansion)
Misc. Lighting & Facility Upgrades
Hutchins St. Square

Total Cost
$11,374,000

Development Impact Fees

General City Facilities

Projects Included

City Hall Expansion
Portion of expansion in two phases (addition, remodel), including parking

Stadium Area Parking
Lockeford @ Stockton

Library
Expansion or satellite site to be determined

Miscellaneous Equipment
Public Works Equipment
Finance Dept equipment, computer upgrade

Miscellaneous Projects
Fee program administration, monitoring (all categories)
General Plan, current plus updates

Total Cost
$11,568,449

Projects Not Included

City Hall Expansion
@ 27.8% per deficiency analysis

Total Cost
$1,171,770

City of Lodi

Draft Development Impact Fees for Capital Facilities

General Plan (GP) Land Use Category	(Draft) Total Fees[3]	per	Assumed Density		Fee	@ Max. Density per GP	Fee
Residential					(per unit)		(per unit)
Low Density	$38,170	acre	5	upa[1]	$7,634	7	$5,453
Medium Density	$58,100	acre	12	upa	$4,842	20	$2,905
High Density	$101,770	acre	24	upa	$4,240	30	$3,392
East Side Residential	$40,100	acre	5	upa	$8,020	7	$5,729
PR - low density	$38,170	acre	5	upa	$7,634	7	$5,453
PR - med density	$58,100	acre	12	upa	$4,842	20	$2,905
PR - high density	$101,770	acre	24	upa	$4,240	30	$3,392
Commercial					(per SF)		(per SF)
Neighborhood	$40,010	acre	30%	far[2]	$3.06	40%	$2.30
General	$48,000	acre	30%	far	$3.67	40%	$2.75
Downtown	$40,010	acre	30%	far	$3.06	200%	$0.46
Office	$53,330	acre	35%	far	$3.50	50%	$2.45
Industrial							
Light	$32,520	acre	40%	far	$1.87	50%	$1.49
Heavy	$31,470	acre	40%	far	$1.81	50%	$1.44
Industrial Reserve	$32,520	acre	40%	far	$1.87	50%	$1.49

[1] upa = units per acre

[2] far = floor/area ratio (building square footage per acre)

[3] total fee includes Water, Sewer, Storm Drainage, Streets & Roads, Police, Fire, Parks & Recreation and General City Facilities per April 1991 draft study. Wastewater connection fee (for wastewater plant), engineering, building permit and other fees for service are not included.

City of Lodi - Total Development Fee Examples

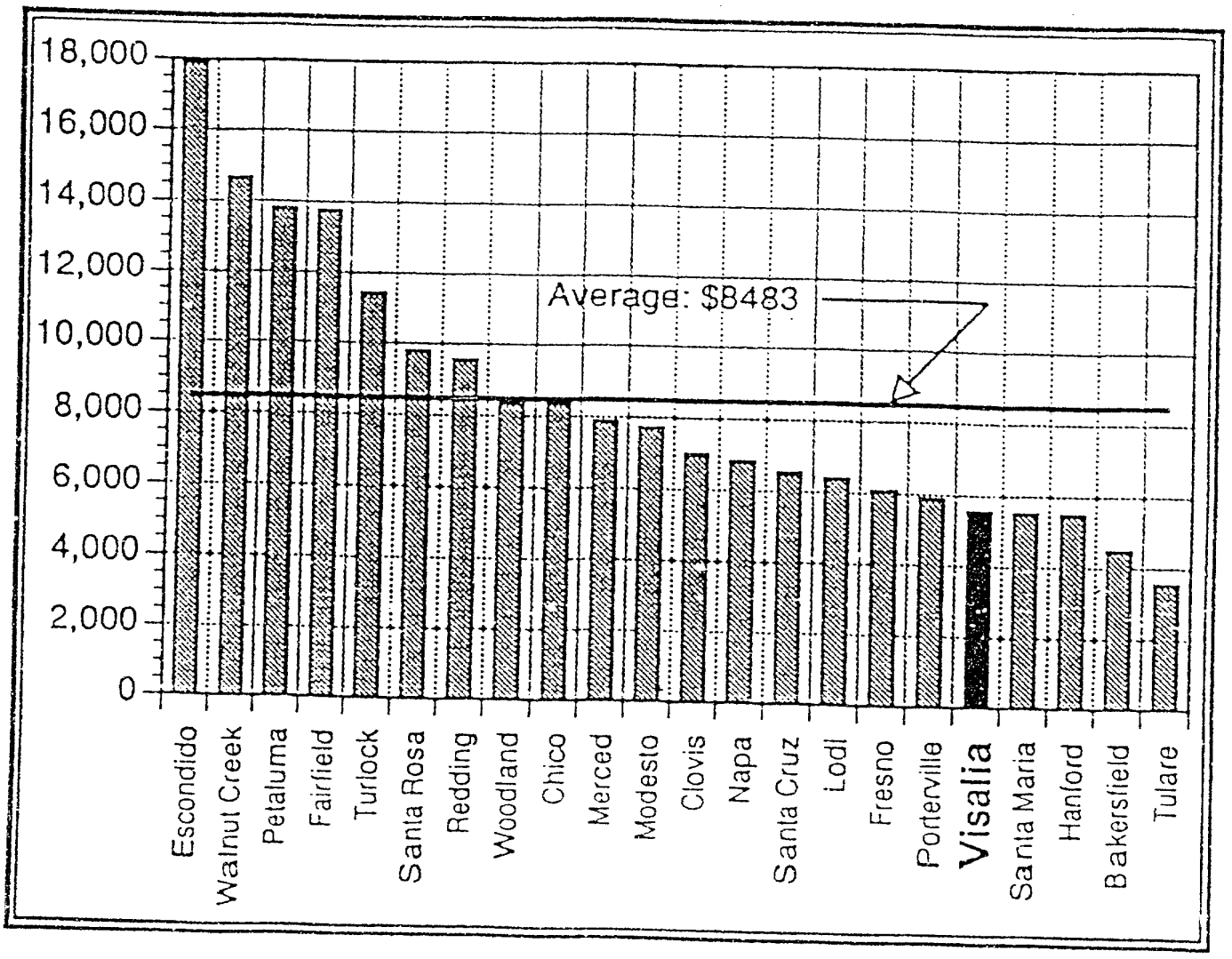
Project Assumptions	Residential		Non-Residential		
Land Use:	Low Density	Med. Density	Light Ind.	Office	Commercial
Area:	10 acres	5 acres	5 acres	2 acres	5 acres
Density:	5 upa	12 upa	40%	35%	30%
#Units; Bldg SF:	50	60	87,000	30,000	65,000
Estimated Off-Site Impr. $:	$400,000.	$100,000.	$125,000.	$50,000.	$150,000.
Existing Fees					
Tentative Map:	$100.	$100.	$100.	$100.	$100.
Engineering (as updated):	$19,600.	$6,100.	$7,350.	$3,600.	$8,600.
$ per:	$394./unit	$103./unit	$0.09/SF	$0.12/SF	$0.13/SF
Sewer Connection					
Base Rate ($/SSU):	$2,099.	$2,099.	$2,099.	$2,099.	$2,099.
Unit of Measure:	1.25 units per 3 Br. Home	1.00 units per 2 Br. Home	1 unit per 8 employees	1 unit per 8 employees	varies w/use assumed 5
# of Empl/acre:	(per Table 7-1, GP Draft EIR)		20	48	28
Sewage Ser. Units:	62.5	60.0	12.5	12.0	28.0
Total Fee:	$131,188.	$125,940.	$26,238.	$25,188.	$58,772.
$ per:	$2,624./unit	$2,099./unit	$0.30/SF	$0.84/SF	$0.90/SF
Storm Drainage					
Base Rate:	$4,050/acre	$4,050/acre	$5,400/acre	$5,400/acre	$5,400/acre
Total Fee:	$40,500.	$20,250.	$27,000.	$10,800.	$27,000.
$ per:	$810./unit	$338./unit	$0.31/SF	$0.36/SF	$0.42/SF
Building Permit					
Assumed SF/DU	2,000	1400			
Bldg Val./SF:	$49.00	$44.70	$23.60	$49.60	$34.00
Assumed Type:	avg. single fam.	avg. apt.	III N	V N	V N
Valuation:	$98,000	$62,580	$2,053,200	$1,488,000	$2,210,000
Total Fee:	$31,625.	$30,512	$6,769	$5,356	$7,161
$ per:	$633./unit	$509./unit	$0.08/SF	$0.18/SF	$0.11/SF
Building Plan Check	65%	of Bldg Permit			
Total Fee:	$20,556.	$19,833.	$4,400.	$3,481.	$4,655.
$ per:	$411./unit	$331./unit	$0.05/SF	$0.12/SF	$0.07/SF
Mech./Elec./Plumb. Permit	$0.03	per SF	$0.02	per SF (estimated)	
Est. Total Fee:	$3,000.	$2,520.	$1,740.	$600.	$1,300.
$ per:	$60./unit	$42./unit	$0.02/SF	$0.02/SF	$0.02/SF
Strong Motion Instrumentation Fee		$0.07 res.	$0.15 non res.	per $1000. val. (State mandated)	
Total Fee:	$343.	$263.	$308.	$223.	$332.
$ per:	$7./unit	$4./unit	$0.004/SF	$0.01/SF	$0.01/SF
Total Existing Fees:	$246,912	$205,517	$73,904	$49,349	$107,919
$ per:	$4,938./unit	$3,425./unit	$0.85/SF	$1.64/SF	$1.66/SF
Proposed Impact Fees:	$38,170/acre	$58,100/acre	$32,520/acre	$53,330/acre	$40,010/acre
Total Proposed Fee: (less existing SD fee)	$341,200.	$270,250.	$135,600.	$95,860.	$173,050.
Proposed $ per:	$6,824./unit	$4,504./unit	$1.56/SF	$3.20/SF	$2.66/SF
Grand Total $ per:	$11,762./unit	$7,929./unit	$2.41/SF	$4.84/SF	$4.32/SF

Assumes proper zoning, environmental clearance, etc.

6/24/91 DEV_FEEC XLS

GRAPHICAL REPRESENTATION OF IMPACT FEES

STUDY COMPLETED BY CITY OF VISALIA



TYPES OF IMPACT FEES CHARGED

STUDY COMPLETED BY CITY OF VISALIA

City	Transportation	Sanitary Sewage	Water	Storm Drainage	Parks & Recreation	School	General Government	Other
Bakersfield	•	•			•	•		
Chico	•	•			•	•		
Clovis	•	•	•	•	•	•		
Escondido	•	•	•		•	•	•	•
Fairfield		•	•		•	•	•	
Fresno	•	•	•	•	•	•	•	
Hanford	•	•		•	•	•		
Lodi		•		•		•		
Merced		•	•		•	•	•	
Modesto	•	•			•	•	•	•
Napa	•	•			•	•		
Petaluma		•	•	•	•	•	•	•
Porterville		•	•	•		•		
Redding	•	•	•	•	•	•	•	
Santa Cruz		•	•		•	•		
Santa Maria	•	•	•	•	•	•		
Santa Rosa	•	•	•		•	•		
Tulare		•		•		•		
Turlock		•	•	•	•	•	•	•
Visalia	•	•		•	•	•		
Walnut Creek	•	•		•	•	•		
Woodland	•	•		•	•	•	•	

RESIDENTIAL IMPACT FEE COMPARISON

per dwelling unit

Assumption: 3-bedroom, 2000 SF single-family dwelling at 5 units per acre

Fee Category	LODI	FAIRFIELD	TRACY	GALT	MANTECA	STOCKTON	WOODLAND	CLOVIS	DAVIS
Notes:	a.	g.	a.	b.		c.		d., f.	
Water	$902	$2,346	$1,400	$1,800	$2,222	$1,395	$278	$240	$719
Sewer	$216	$4,851	$2,500	$3,000	$2,222	$1,859	$1,440	$1,924	$1,257
Storm Drainage	$1,476		$5,204	$360	$498		$1,782	$448	$210
Streets & Roads	$1,076		$7,770	$1,139		$2,008		$472	$2,266
Police	$226			$196		$253			
Fire	$102			$205		$115	$173		
Parks & Recreation	$2,362	$1,579	$4,404		$592	$1,429	$800	$488	$2,156
General City Fac.	$1,274		$1,663	$1,155	$350	$61	$732		$1,057
Wastewater Conn.	$2,624								
Garbage								$140	
Traffic							$732		
Public Safety (Police, Fire)			$75						$335
Bridges/RRCrossings								$176	
Route 104/Twin Cities Rd				$375					
NE Area Improvements				$4,326					
NE Area Water storage				$121					
Traffic Signal					$200	$80		$146	
Major Equipment Purchases					$350				
Highway Interchange					$500				
Libraries						$234			
Community Rec. Center						$128			
Administrative Charge						$183			
Open Space Preservation									$308
Core Area Enhancements									$6
City Construction Tax									$3,220
General Government		$2,148							
Total:	$10,258	$10,924	$23,116	$12,677	$6,934	$7,745	$5,937	$4,034	$12,144

Average: **$10,419**

Notes:

a. Applicable if not in assessment district or special area of benefit.

b. Includes $950 for well development. If in assessment district or NE area, this fee is not charged.

c. Includes standard connection fee and surface water facilities fee.

d. Will increase substantially because of DBCP cleanup, meter cost not included.

e. Davis subtotal varies by sub area from $6,761 to $10,705 (used average) plus City construction tax (voter approved) of $1.61/ sq.ft

f. No lift station fee included, other fees based on A-1 area.

g. Per Visalia study; Gen. Gov't includes storm, street & misc. oversizing.

Past Funding Sources

Property, Sales & Misc. Taxes

Approx. $9,200,000/year

Does not cover Police. Fire & Parks/Recreation Operating Expenses

General Obligation Bonds

Storm Drain, Public Safety, General Government Projects

Require Voter Approval & Revenue Source To Repay

Utility Funds

In Long Past - Paid For All Improvements

More Recently - Paid Only For Oversize & Major Facilitiees

Fee Program Would Shift All Needed Capital Facility Costs to New Development

Federal Revenue Sharing

Approx. $440,000/year in 70's & 80's

City Hall Remodel, Misc. Storm Drains, Public Safety Projects & Equipment

No Longer Available

Federal EDA Grants

Amounts Varied Per Project

Library, Trunk Storm Drains & Sanitary Sewers

No Longer Available

HUD (CDBG) Grants

Approx. $300,000/year in late 80's to present

Restricted to Certain Areas/Uses

State Grants

Amounts Vary Per Project

Park Improvement Projects

Availability Varies w/State Bond Issues

Private Donations

Amounts Vary Per Project

Hutchins St. Square, Service Club Projects @ Parks & Medians

Availability Varies: Amount Small Compared to Demand

PUBLIC DRAFT REPORT

CITY OF LODI

DEVELOPMENT IMPACT FEE STUDY

Prepared for:

CITY OF LODI

Prepared by:

NOLTE AND ASSOCIATES
1750 Creekside Oaks Drive, Suite 200
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CHAPTER 1

INTRODUCTION

INTRODUCTION

The enactment of AB 1600 (Government Code §66000 et. seq.) has generated formal and stringent requirements for documenting the basis for valid development impact fees. In response to the changing legal climate, as well as the desire to have a comprehensive financing plan for the various public facilities in Lodi, the current fees must be updated and new numerous fees need to be implemented.

The goal of the Development Impact Fee Study is to prepare development impact fees which will provide funds to construct various types of improvements such that the City of Lodi's adopted level of service is maintained throughout the planning period. This goal will be attained consistent with the requirements of AB 1600.

Purpose of the Fee

The purpose of development impact fees is to provide adequate financing for the various public facility projects that are required to implement the City's General Plan. The fee is imposed such that new development will bear its fair share of providing adequate infrastructure.

The fees collected will be used to finance the design, construction, and inspection of streets and roads, Water, Sewer, Drainage, Parks and Recreation, Police, Fire, and General City facilities. The fee revenue will also be used for a major update of the fee program, which is to be performed every 5 years.

Planning Period

The proposed General Plan before the City of Lodi covers a planning period of April 1987 to 2007. For the purposes of the fee study, the planning period was broken down into fiscal year increments: 1990/91, 1991/92, 1992/93, 1993/94, 1994/95, 1995/96, 1996/97, 1997 - 2002, and 2002 - 2007. The planning increments are the basis for projecting fee collections, capital improvement expenditures and cash flow analyses.

Basis of Costs

Capital improvement schedules have been prepared for the Proposed General Plan that cover Water, Sewer collection (but not the wastewater treatment facility), Storm Drainage, Streets and Roads, Police, Fire, and General City facilities. Capital costs included in the General City facilities category are, for example, city hall expansion, library expansion, fee program monitoring, parking lot construction, and miscellaneous projects not falling

into other infrastructure categories. Project descriptions for each project were developed with the assistance of City staff, other City-retained consultants, and the authors. For each major project, estimates of cost have been prepared utilizing current cost data from the City, recent bids for similar projects, contractors and suppliers. Estimates of cost are based upon January 1, 1990 dollars throughout this report. The Engineering News Record 20-Cities Average Construction Cost Index for January 1990 was, at that time, 4673.

Background - Development Forecast

The first step in calculating a valid development impact fee is to prepare a forecast of the timing and rate at which the City will develop. This forecast must be consistent with Lodi's General Plan and Growth Management Ordinance.

The development forecast serves two purposes:

- The development forecast provides the basis for determining when the required infrastructure must be completed to maintain the targeted level of service set forth by the City.

- The development forecast plays a significant role in forecasting cash flow. The amount of development that occurs throughout the planning period determines the amount of the fee and the development in any particular year determines the total dollars that are available to fund improvement projects.

The forecast of final mapping was prepared per gross acre by the City of Lodi and is presented in Appendix A. Because the City will collect development impact fees at the time of the final subdivision map is recorded, a forecast of final mapping was used to estimate the inflow of cash. The construction capital outlay forecast was based upon the City's proposed Growth Management Plan which provided the probable location of development.

The annual update of the fee program will include an assessment of the extent to which development in Lodi has been occurring as forecasted. If rates of development begin to depart substantially from expectations, the development forecast and fee program will be updated based on a forecast that reflects then-current expectations.

Residential Acre Equivalents

After the amount of development was forecast for each land use category, a conversion was made into the number of Residential Acre Equivalents (RAE's) that would be developed, for each category of public improvements. An RAE factor measures the use or burden a land use places on a category of public improvements (e.g., water supply or roadway improvements) relative to the use or burden placed on those improvements by an acre of single family dwellings in the low-density residential category.

As one simple example, the water service RAE factors reflect relative water consumption. Since the Low Density residential category is selected as the use from which all other land uses are measured, this land use category has a RAE factor for all services equal 1.0 RAE per acre. All other RAE factors for the category of public services being considered are scaled relative to this "base" RAE factor for the Low Density Residential land use category.

For this example, the RAE factors for water are calculated in the following manner for low density and medium density residential land use categories. Assume a population and unit density as shown below.

Land Use	Population	Unit Density
Low Density	2.75/unit	5/acre
Medium Density	2.25/unit	12/acre

Also, assume a per capita average water consumption of 285 gallons per day. Therefore, the water demand per acre can be calculated as follows:

Low Density: Demand = 2.75 x 5 x 285 = 3,919 gal/day/acre

Medium Density: Demand = 2.25 x 12 x 285 = 7,695 gal/day/acre

By this method, the results indicate that the demand of medium density residential land exerts a 2 times (7695/3919 = 1.96) greater demand upon water supply and transmission facilities than does low density residential. Therefore, a RAE factor of 2.0 is assigned to medium density residential for water remembering, of course, that low density residential is the baseline having a RAE factor of 1.0.

CHAPTER 2

METHODOLOGY AND RESULTS

SUMMARY OF FUNDING SOURCES

Capital improvement projects to support the Proposed General Plan and other City improvements are to be funded through a number of sources. In the course of identifying Proposed General Plan capital improvements, a number of existing deficiencies were identified in each of the service areas that are not to be funded by development impact fees. City staff has projected, where possible, the sources of funds to finance those projects and/or portions of projects that are not development related as summarized in Table 2-1.

During the course of assembling the information included in this report and summarized in Table 2-1, a number of capital improvement plans, old and new, were reviewed. Information has been taken from these capital improvement plans and has been included in the table. Because the planning horizon for the capital improvement plans provided by the City are not synchronized with the General Plan period, the totals for capital improvements in Table 2-1 are not comparable to the City plans.

Phasing of Improvements for Maximum Efficiency

The matching of required public improvement projects to revenues from the development impact fee program was an iterative process that included close coordination with the Growth Management Plan. Two objectives were served:

- The location and timing of new public improvements in Lodi were planned to help assure an orderly and cost-efficient pattern of development.
- Public improvements were timed to assure that Level of Service (LOS) targets for each service were reasonably maintained.

Insofar as practical, the growth rates that are part of the Growth Management Plan can be accommodated throughout the City. Development can occur simultaneously in several areas of the City, rather than be concentrated in one area at a time. A temporary quasi-monopoly on supply of developable land is avoided.

The following paragraphs describe some of the basic assumptions and concepts that were used in arriving at project phasing. Additional information concerning specific facilities is included at the end.

Assumptions/Concepts

The following assumptions and concepts guided the process of preparing the development forecast and staging of public improvements to meet LOS targets.

TABLE 2-1

04/11/91

SUMMARY OF ESTIMATED MAJOR CAPITAL IMPROVEMENT PROGRAM COSTS AND FUNDING SOURCES

DESCRIPTION	PROGRAM COSTS (1)	GENERAL FUND	WATER FUND	SEWER FUND	STORM DRAIN FUND	SAN JOAQUIN COUNTY	STATE AND FEDERAL FUND	GAS TAX FUND & T.D.A.	MEASURE 'K' FUNDS	OTHER	DEVELOPMENT IMPACT FEE FUND (2)
1. Water Service	$10,891,525	$0	$1,628,000	$0	$0	$0	$0	$0	$0	$0	$9,263,525
2. Sewer Service (3)	$3,013,920	$0	$0	$1,005,500	$0	$0	$0	$0	$0	$639,500 (4)	$1,368,920
3. Storm Drainage	$16,824,000	$930,000	$0	$0	$121,000	$0	$0	$0	$0	$0	$15,773,000
4. Streets and Roads	$46,194,450	$14,893,513	$0	$0	$0	$176,000	$831,000	$13,552,500	$1,450,750	$0	$15,290,687
5. Police	$2,576,000	$146,000	$0	$0	$0	$0	$0	$0	$0	$0	$2,430,000
6. Fire	$2,155,000	$1,090,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,065,000
7. Parks and Recreation	$30,114,000	$5,021,000	$0	$0	$0	$0	$0	$0	$0	$6,353,000 (5)	$18,740,000
8. General City Facilities	$13,190,219	$1,621,770	$0	$0	$0	$0	$0	$0	$0	$0	$11,568,449
TOTAL:	$124,959,114	$23,702,283	$1,628,000	$1,005,500	$121,000	$176,000	$831,000	$13,552,500	$1,450,750	$6,992,500	$75,499,581

NOTES:

1. Costs do not include streets and utilities within development projects typically constructed by the developer as normal improvements.
2. "Development Impact Fee Fund" will consist of eight separate funds, one for each category of facility.
3. Sewer service does not include the wastewater plant expansion which is funded by the existing wastewater connection fee.
4. Lift station area of benefit fees.
5. Hutchins Street Square Fund.
6. Dollar amounts are in January 1, 1991 dollars

- Development of new residential land will be limited such that the population will grow at 2% based on the September 1989 population. This allows more units (acres) in the early years than in middle years due to "catch up" after the wastewater moratorium.

- Commercial development will tend to follow residential development, except where one major development is currently being processed (Lodi Shopping Center, also called Sunwest Plaza, at the SE corner of Lower Sacramento Road and Kettleman Lane).

- Industrial development was assumed to grow uniformly.

- The implementation of the Growth Management Plan will discourage new developments that require extraordinary extension of utilities or other improvements, such as trunk lines through agricultural property. This will help lower the cost of development and reduce disruption of agricultural activities.

Procedure for Staging Public Improvements

The specific steps that led to the staged Capital Improvements Program are described in the following paragraphs.

- The annual number of units to be allowed was converted to acres based on an average of seven units per acre per the Draft General Plan.

- Sub-areas surrounding the City were identified based on available storm drain basins, utility trunk lines, major streets, General Plan limits, and natural boundaries.

- The acreages were matched with the sub-areas and broken into three phases: one 7 year block followed by two 5 year blocks.

- The above two steps were repeated until the acreage provided in each phase matched the number of units in the first step.

The majority of the projects were then placed in the appropriate phase coinciding with development of the adjacent area. This would include projects in which the impact fee fund would be used in conjunction with frontage improvements by a developer such as for oversized lines and major street crossings. As noted in the assumptions, there should be few cases in which a utility must be extended outside the development. (Exceptions and clarifications are noted below.)

Careful attention was paid to the timing of construction of public improvements, compared to increases in development and demand for services. Each improvement was staged to insure that it would be completed and in place

before the actual level of service had declined below the City's Level Of Service target.

In support of the objective of avoiding degradation of service level, the City of Lodi intends to collect development impact fees in advance of the date of final inspection or the date a Certificate of Occupancy is issued. Delaying residential fees to the time of occupancy would assure that completion of public improvements would considerably lag the residential development that is creating a significant percentage of the demand for the improvements. To avoid this situation, the City's fee ordinances will provide that development impact fees are due at the time that a final subdivision map is filed. Public capital improvements can then be constructed in parallel with the process of readying parcels for development and constructing residences. The service capacity provided by the public improvements can be in place at the time that increased demand actually occurs.

It is possible that developed parcels within the existing General Plan will undergo redevelopment or a change in the land use resulting in assessment of additional fees. In such instances, fees would be collected upon issuance of the building permit.

The present document constitutes a "...proposed construction schedule or plan..." for seventeen years. The various fee ordinances will ensure that "...an account has been established and funds appropriated..." Accordingly, the quoted requirements of Government Code Section 66007 have been met. Lodi can collect residential impact fees in advance of final inspection or occupancy.

Comments on Specific Projects and Services

The following paragraphs explain the reasons for the staging of certain key projects.

Streets and Roads

- The Highway 12 (Kettleman Lane) Project Study Report was placed early in the program. This Report will take some time to do and the results will affect the scope and cost of subsequent projects.

- Street capacity improvements were phased based on examination of the present and future volumes, capacity of existing improvements and the capacity after the new improvement.

Parks and Recreation

- The Master Plan Study was placed early since it will take some time to do and the results will affect the scope and cost of subsequent projects.

- Parks would be completed by the end of the phase in which adjacent development occurred.

Water

- No new wells would be required in 1990/91 since no annexations/new housing would be occupied in that year.

Police, Fire and General Facilities

- Projects were phased based on discussions with the Police and Fire Chiefs and other department heads.

- The west side fire house was placed in the first phase since it is located in the corresponding area.

Identifying Projects Curing Existing Deficiencies

The entire list of capital improvements was reviewed to identify projects which primarily cured existing deficiencies. Projects that were excluded from the fee program based on this evaluation are any type of replacement, repair or renovation of an existing facility which provides for little or no added capacity.

In addition, large projects, or groups of projects, in Parks and Recreation, Police and General City Facilities were evaluated on an individual basis. The results of this level of analysis is that certain projects were split between new development (fee program funded) and existing development (other financing source).

Interfund Borrowing

The staging of capital improvements frequently produces cash flow deficits in one or several of the fee funds. This is the result of large projects that, once completed, provide capacity beyond the year of construction and beyond the time in which the funds are required to construct the project. One approach to deal with cash flow deficits is through interfund borrowing.

Interfund borrowing is predicated on the creation of a "Pooled Money Fee Account" into which the annual surplus from each fee account flows and from which borrowing to cure cash flow deficits occurs. Each fee (i.e. Water, Sewer, etc.) is calculated and accounted for separately. Positive fund balances earn interest revenue and negative fund balances accrue interest to be paid. Under this approach the development impact fee has two parts.

1. Portion Of The Fee From Construction Of Improvements: This part of the fee is equivalent to the average cost of the programmed improvements per RAE.

2. Portion Of The Fee From Finance Charge: The finance charge is set such that the ending balance in the particular fee fund is as close to zero as possible. In cases where the cash flow is relatively smooth such that no borrowing will take place, it is entirely possible that the "Finance Charge" will be negative. This is the result of interest earnings over the course of the program.

   On the other hand, when funds must be borrowed a positive finance charge, and thus higher fee, is required to pay the interest cost involved in borrowing among funds.

The test of whether or not interfund borrowing is successful in compensating for the cash flow deficits is the ending fund balance in the Pooled Money Fee Account. If this figure is positive throughout the program then interfund borrowing has served its purpose and cured the cash flow problems. If any of these figures are negative, interfund borrowing has not fully alleviated the cash flow deficits. Adjustments to the project staging, or borrowing from an outside source would be necessary to fund the program using the interfund borrowing approach.

The cash flow analysis indicates that almost every fee has cash flow problems. These issues have been resolved through inter-fee-fund borrowing such that the program of capital improvements are funded in the year required.

Alternatives to this approach include borrowing from other City funds, which would also entail repayment with interest, and "borrowing" from developments early in the program. This would entail charging a higher fee to the initial development projects and repaying it in later years with fees from subsequent development. Both alternatives require additional administrative effort and result in a higher fee.

Detailed Methodology

A project phasing schedule is prepared, as determined by the development forecast and the adopted service standard, showing the timing of the expenditures required for each improvement. A forecast of Residential Acre Equivalents is prepared, then converted into a forecast of revenues collected from the fee in each period. The fee and cost of capital improvements are inflated, for purposes of analysis, at the same rate. However, it was assumed that the inflation effects on the fee are lagged one year due to the fact that the fee is only updated at the end of each year. Because the General Plan was not completed in the 1990-91 fiscal year, all capital costs were inflated to January 1991 dollars and the fees then calculated.

The amount of the finance charge is manipulated until:

- All projects have been constructed at their then actual year cost;

- Only a nominal surplus remains in the Development Impact Fee account at the end of the planning period.

Summary of Fees

A summary of the development impact fees is presented by major land use category in Table 2-2. This summary presents the summation of the impact fee imposed for each of the relevant facility categories in the development impact fee plan. The fee for each particular category of public improvement is presented in the applicable chapter (e.g. Streets and Roads - Chapter 6). Each fee, except portions of the sewer impact fee is imposed citywide throughout the entire planning period.

Each fee will be fine-tuned annually to reflect inflation and other minor adjustments. Annual updates of the fee should be based upon the increase in construction costs for the year as determined by comparing the ENR 20 Cities Average Construction Cost Index for the beginning and end of the year. The first annual fee update (1989-90 to 1990-91) is reflected throughout the report. Fee calculations for this report were done to the nearest $1.00 and have been rounded to the nearest $10.00.

Changes In Land Use Entitlements

Parcels may undergo redevelopment or a change to a more intensive land use. The development impact fees that will be due reflect the difference between the fee appropriate to the more intense use and the fee that would have been appropriate to the previous use. In concept, the various classes of infrastructure had the capacity to meet the demand placed by the original land use. The intensification of use will create additional demand. Additional capacity must be purchased through the incremental development impact fee.

For the case when a proposed development would result in a more intense demand upon infrastructure than planned, it may be appropriate to assess a special fee. Purpose of such a special fee would solely be to insure that services/benefits provided by the City are fairly paid for by the user. Of course, by the nature of setting fees based upon a service standard, the focus is upon the City and neighborhood averages. Therefore, demand deviation above and below the average is assumed. Defining the maximum permitted demand deviation before assessing a special fee should be up to the Public Works Director.

TABLE 2-2
SUMMARY OF DEVELOPMENT IMPACT FEES
ALL SERVICES

04/15/91

Land Use Categories	Total Fees	Water RAE(1)	Water Fee	Sewer RAE(1)	Sewer Fee	Storm Drainage RAE(1)	Storm Drainage Fee	Streets & Roads RAE(1)	Streets & Roads Fee	Police RAE(1)	Police Fee	Fire RAE(1)	Fire Fee	Parks and Recreation RAE(1)	Parks and Recreation Fee	General City Facilities RAE(1)	General City Facilities Fee
RESIDENTIAL																	
Low Density	$38,170	1.00	$4,510	1.00	$1,080	1.00	$7,380	1.00	$5,380	1.00	$1,130	1.00	$510	1.00	$11,810	1.00	$6,370
Medium Density	$58,090	2.00	$9,010	2.00	$2,160	1.00	$7,380	1.96	$10,550	1.77	$2,010	1.96	$1,000	1.43	$16,880	1.43	$9,100
High Density	$101,770	3.50	$15,770	3.50	$3,790	1.00	$7,380	3.05	$16,420	4.72	$5,350	4.32	$2,210	2.80	$33,040	2.80	$17,810
East Side Residential	$40,100	1.00	$4,510	1.00	$1,080	1.00	$7,380	1.00	$5,380	1.09	$1,230	1.10	$560	1.10	$12,970	1.10	$6,990
PLANNED RESIDENTIAL																	
Low Density	$38,170	1.00	$4,510	1.00	$1,080	1.00	$7,380	1.00	$5,380	1.00	$1,130	1.00	$510	1.00	$11,810	1.00	$6,370
Medium Density	$58,100	2.00	$9,010	2.00	$2,170	1.00	$7,380	1.96	$10,550	1.77	$2,010	1.96	$1,000	1.43	$16,880	1.43	$9,100
High Density	$101,770	3.50	$15,770	3.50	$3,790	1.00	$7,380	3.05	$16,420	4.72	$5,350	4.32	$2,210	2.80	$33,040	2.80	$17,810
COMMERCIAL																	
Neighborhood Commercia	$40,010	0.64	$2,880	1.25	$1,350	1.33	$9,820	1.90	$10,230	4.28	$4,860	2.77	$1,420	0.32	$3,750	0.89	$5,700
General Commercial	$48,000	0.64	$2,880	1.25	$1,350	1.33	$9,820	3.82	$20,570	2.59	$2,940	1.93	$990	0.32	$3,750	0.89	$5,700
Downtown Commercial	$40,010	0.64	$2,880	1.25	$1,350	1.33	$9,820	1.90	$10,230	4.28	$4,860	2.77	$1,420	0.32	$3,750	0.89	$5,700
Office Commercial	$53,330	0.64	$2,880	1.25	$1,350	1.33	$9,820	3.27	$17,610	3.72	$4,220	2.46	$1,260	0.54	$6,430	1.53	$9,760
INDUSTRIAL																	
Light Industrial	$32,520	0.92	$4,150	0.33	$360	1.33	$9,820	2.00	$10,770	0.30	$340	0.64	$330	0.23	$2,680	0.64	$4,070
Heavy Industrial	$31,470	0.92	$4,150	0.33	$360	1.33	$9,820	1.27	$6,840	0.19	$210	0.61	$310	0.33	$3,890	0.93	$5,890
Industrial Reserve	$32,520	0.92	$4,150	0.33	$360	1.33	$9,820	2.00	$10,770	0.30	$340	0.64	$330	0.23	$2,680	0.64	$4,070

Source: Nolte & Associates and Angus McDonald & Associates

NOTES:

(1) Residential Acre Equivalents

(2) Dollar amounts shown are in January 1, 1991 dollars.

An example of more intense demand for service than provided for in the fee structure is a shopping center that is located in a neighborhood commercial land use. The specific use (shopping center) is allowed in the land use (Neighborhood Commercial). In the case of the Streets and Roads Fee, a net trip rate of 10.5 peak hour trips is assumed for Neighborhood Commercial but the City Circulation Plan assumes 30 peak hour trips for shopping center uses. In this case, the deviation above the service standard provided by the fee is approximately 200%. Therefore, a special fee is recommended.

The opposite example to an intensification of use would be a parcel that develops at a use that is less intense than its land use entitlement. The various fee ordinances should provide for a "exception procedure" to deal with instances that simply were not contemplated at the time that the ordinance was adopted. As a generalization, exceptions should be granted sparingly. Facilities were sized based on the expected land uses and in many cases capacity will be provided in advance of total demand because of the inability to build certain classes of projects in stages. If exceptions are granted easily, particularly in the later years of the planning period, sufficient development impact fees will not be available to complete the Capital Improvements Program.

An additional consideration is that although a parcel may be developed initially in a less intense use, it may undergo redevelopment in future years. The full fee would be due. If, subsequently the parcel was redeveloped, it would receive credit for the fact that the full fee had been paid. Only if the future use was more intense than the original land use category would a higher fee be due.

The amount and timing of redevelopment and reuse cannot be predicted with any accuracy. Accordingly, the development forecast on which the fees were based includes only new development. If proposals for significant amounts of redevelopment or reuse are forthcoming in future years, the effect of this can be considered during the annual update of the fee ordinances.

Successfully implementing a 17 year, $124,000,000 Capital Improvements Program is a major undertaking. It will require a very serious effort at program management and monitoring of actual performance as compared to plan.

The Capital Improvements Program contains specific line items to provide the cost of staff or consultant services to act as Program Manager for the Capital Improvements Program. A budget is also provided for a major General Plan Update/Capital Improvements Program and Development Impact Fee Update every fifth year.

The program management function should include a responsibility to monitor actual performance compared to plan. This monitoring function can be combined with any environmental impact monitoring program that is recommended either in Environmental Impact Report (EIR) on each update of the City's update of the General Plan or in the EIR's for major projects.

CHAPTER 3

WATER SERVICE

OVERVIEW

Water service to Lodi residents is provided by the City. Major components of the water system include wells, distribution piping and a single elevated storage tank. The following sections will describe the City's existing supply and distribution facilities, current planning for expansion of the system, policy relating to cost sharing for major facilities, and existing water service deficiencies.

Supply

Water for the City of Lodi is pumped directly from wells located within the City limits. At present, wells discharge directly into the distribution system. Of the 25 wells needed to serve the existing City, 20 are currently producing. Three wells are not producing due to contamination. Funds have been appropriated to construct two new wells and to construct two replacement wells. Also, funds have been appropriated to design treatment facilities for the removal of DBCP.

Water quality in the aquifers tapped by City wells is generally good. Recently adopted Department of Health Service (DHS) standards for dibromochloropropane (DBCP) will impact the City because the DBCP concentration at 11 well sites exceeds the new State standard. Presently, the City is preparing to conduct pilot studies of granular activated carbon filtration units to remove the DBCP from the water. With respect to DBCP, the better wells are located in the northeast sector of the General Plan area.

Groundwater levels within the basin have steadily dropped over the last years. Concerns for salt water intrusion is a regional concern but may not be a threat to Lodi due to influence of the Mokelumne River as a major contributor to replenishment of the groundwater basin.

Well yields in Lodi are good. Individual wells produce an average of 1,600 gallons per minute. Pumping levels vary across the well field by approximately 80 feet, with the shallowest water in the northeast area and the deepest water in the southwest area. The City operates a Supervisory Control and Data Acquisition (SCADA) system to assist in operating the well field, maintaining pressures in the system, and recording operating data.

Distribution System

Existing distribution piping within the City ranges in size from 2 to 14 inch. By current standards, any distribution piping smaller than 6 inches is

substandard. Smaller pipe was primarily used in the older portions of town and it has, in many cases, been constructed in backyards and alleys.

Backbone of the City distribution system consists of a network of 10 and 14 inch pipe laid on an intersecting grid. Grid intersections are typically separated by a distance of 1/4 to 1/2 mile.

Pressures within the distribution system are maintained using an elevated tank and with assistance from the SCADA system. Water elevations in the tank are consistently 165 to 180 feet, resulting in a 49 to 55 pound per square inch pressure at the tank.

Water Master Plan

Current planning for the expansion of water supply and distribution facilities to serve the City through the period of the General Plan is embodied in the "Water Master Plan" prepared in 1990. Based upon the General Plan projected population and average water demands of 285 gallons per capita per day, total average day water demand at 2007 will be 22.1 million gallons per day. Existing (1987) average day demand is 12.58 million gallons per day.

A number of planning and design recommendations were presented in the Water Master Plan. Those recommendations that affected the information presented in this report are summarized below.

1. Design for future wells should conform to that for recently constructed wells: 21, 22, and 23.

2. Well and distribution system should be capable of meeting maximum day demands with 20% of the wells out of service.

3. For each 2,000 equivalent persons added to the system, a new well should be constructed.

4. One of every three wells should be equipped with standby power.

5. Re-evaluate the Water Master Plan at least every 5 years.

Water Reimbursement Policy

Under the City's Water Main Extension policy, applicants are reimbursed a portion of the construction cost of oversize mains and major crossings. Commonly, city's and agencies share in the cost of constructing special items of infrastructure, especially, since these special items are typically part of the backbone of the system.

For oversize mains, the reimbursement policy applies to water mains larger than 8 inches in diameter. Major crossings covered by this policy are Woodbridge Irrigation District canals, Southern Pacific Transportation

Company, Central California Traction Company, Highway 99, Highway 12 west of Highway 99, Lower Sacramento Road, and Hutchins Street south of Kettleman Lane. For major crossings, the City will reimburse one half the cost of construction.

City water reimbursement policy is reasonable for the facilities to which it applies. In developing the fee program for water service, the existing policy has been applied to oversizing of water mains and construction of major crossings. For the purposes of this report, reimbursable construction costs are assumed to include materials, construction, administrative, engineering and inspection. Administrative and engineering reimbursement is limited to 10% by City ordinance.

Existing Deficiencies

The Water Master Plan identified a number of existing deficiencies in the water distribution system. These deficiencies generally include replacement of older pipe and construction of additional mains to reinforce the distribution network in older areas of the City. Significant water quality (DBCP) deficiencies exist at 12 of the 20 producing wells. Estimated cost to correct the pipeline and water quality deficiencies is $8.2 million. Pipeline reconstruction will be funded through the City water fund. DBCP facilities for existing wells will be constructed using loaned State funds that will be repaid by customers through water service rates.

Specific listings of the projects earmarked to correct existing deficiencies are not included in this report. Estimates of probable construction cost have been developed for the existing deficiency projects identified by the City. Total estimated cost to construct these projects is $1,628,000. Funds to construct these projects will come primarily from the Water Fund.

PLANNED WATER FACILITIES

Water facilities to serve buildout of the General Plan were identified in the Water Master Plan. As part of the public facilities financing effort of the General Plan, specific project descriptions were generated for those improvements identified by the Water Master Plan. Generally this effort included defining the length and size of pipe and appurtenant facilities; defining the additional equipment to be provided at the wells; and identifying the canal, street and railroad crossing that involve cost sharing by the City. A summary of these facilities is presented below and described in Table 3-1. Project numbers listed in Table 3-1 are used to identify the project locations on Figure 3-1.

In Table 3-1, two columns are shown, Program Cost and Impact Fee Fund. Program Cost is defined as project costs to be funded through the City Water Fund. Program Cost does not include costs borne by the developer. Program Cost does include costs allocated to the Impact Fee Fund. Costs listed in the Impact Fee Fund column represent those costs for specific projects allocated

TABLE 3 – 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
WATER MAIN EXTENSIONS												
MWSI001	Turner Rd. transmission main consisting of 2,050 lf 10–inch water main from easterly of the Central Calif. traction Co. (oversized main)	$16,000	$16,0[illegible]	$0	$0	$0	$0	$0	$0	$0	$2,613	$13,387
MWSX010	Turner Road transmission main (MWSI001) includes construction of the main under the Central Calif. Traction Co. (cost sharing)	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$20,000
MWSI002	Lodi Avenue transmission main consisting of 1,200 lf 10–inch water main easterly from Cluff Ave. to Central Calif. Traction Company (oversized main)	$9,000	$9,000	$0	$0	$0	$0	$0	$0	$0	$1,470	$7,530
MWSI003	1,350 lf 10–inch water main southerly from Lodi Avenue (oversized main)	$11,000	$11,000	$0	$0	$0	$0	$0	$11,000	$0	$0	$0
MWSI004	Guild Avenue transmission main consisting of 6,600 lf 10–inch water main along future Guild Avenue between Pine and Kettleman. (oversized main)	$36,000	$36,000	$0	$0	$0	$0	$0	$0	$0	$36,000	$0
MWSI005	Transmission main parallel to and adjacent to Central Calif. Traction Co. RR tracks, consisting of approx. 6,600 lf of 10–inch water line between Pine and Kettleman. (oversized main)	$51,000	$51,000	$0	$0	$0	$0	$0	$0	$0	$0	$51,000

TABLE 3 - 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI006	Industrial Way transmision main consisting of 900 lf 10-inch water main to the west of Cluff Avenue. (oversized main already constructed)	$7,000	$7,000	$7,000	$0	$0	$0	$0	$0	$0	$0	$0
MWSI007	Industrial Way transmission main consisting of 1,180 lf 10-inch water main to the east of Cluff Avenue extending MWSI006. (oversized main)	$9,000	$9,000	$0	$0	$0	$0	$0	$0	$0	$9,000	$0
MWSI008	Beckman Road transmission main consisting of 1,300 lf 10-inch water main to the north of Kettlemann Lane. (oversized main)	$10,000	$10,000	$0	$0	$10,000	$0	$0	$0	$0	$0	$0
MWSI009	Cluff Avenue transmission main consisting of 2,600 lf 10-inch water main along future street between Kettleman and Vine. (oversized main)	$20,000	$20,000	$0	$0	$0	$0	$0	$20,000	$0	$0	$0
MWSI010	Kettleman Lane transmission main consisting of 3,680 lf 12-inch water main westerly from Lower Sacramento Road to Mills Avenue. (oversized main)	$57,000	$57,000	$0	$0	$0	$0	$0	$17,000	$0	$0	$40,000
MWSI011	Turner Road transmission main consisting of 2,600 lf 10-inch water main from Lower Sacramento Road. (oversized main)	$20,000	$20,000	$0	$9,714	$3,007	$3,065	$3,130	$1,084	$0	$0	$0

TABLE 3 - 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSI012	Applewood Drive transmission main consisting of 1,300 lf 10-inch water main consisting of 1,300 lf 10-inch water main southerly from Turner Road to the existing main. (oversize main)	$10,000	$10,000	$0	$4,857	$1,503	$1,532	$1,565	$542	$0	$0	$0
MWSI013	Lower Sacramento Road transmission main consisting of 550 lf 10-inch water main northerly from Yosemite Avenue. (oversize main)	$4,000	$4,000	$0	$4,000	$0	$0	$0	$0	$0	$0	$0
MWSI014	Applewood Drive transmission main consisting of 13,480 lf 10-inch water main southerly from existing Applewood to Hainey Lane. (oversized main)	$105,000	$105,000	$0	$0	$0	$0	$0	$0	$0	$0	$105,000
MWSX001	Applewood Drive transmission main MWSI014 also includes construction of a 10-inch water line under the W.I.D. Canal (cost sharing)	$9,000	$9,000	$0	$0	$0	$0	$0	$0	$0	$0	$9,000
MWSX002	Applewood Drive transmission main (MWSI014) also include construction of a 10-inch water line across Lower Sacramento Road (cost sharing)	$9,500	$9,500	$0	$0	$0	$0	$0	$0	$0	$9,500	$0
MWSI015	Evergreen Drive transmission main consisting of 3,260 lf 10-inch water southerly and easterly from existing Evergreen Drive to Lower Sacramento (oversize main)	$25,000	$25,000	$0	$12,143	$3,759	$3,831	$3,912	$1,355	$0	$0	$0

TABLE 3 - 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWSX009	Evergreen Drive main (MWSI015) includes construction of the main under Lower Sacramento Road (cost sharing)	$9,500	$9,500	$0	$0	$0	$0	$9,500	$0	$0	$0	$0
MWSI016	Lodi Avenue transmission main consisting of 2,600 lf 10-inch water main westerly from Lower Sacramento Road to General Plan Boundary. (oversize main)	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$0	$3,266	$16,734
MWSI017	Vine Street transmission main consisting of 2,250 lf 10-inch water main westerly of Lower Sacramento Road along a future street alignment. (oversized main)	$18,000	$18,000	$0	$0	$0	$0	$0	$0	$0	$2,939	$15,061
MWSI018	Kettleman Lane transmission main consisting of 4,350 lf 10-inch water main westerly of Lower Sacramento Road to Sylvan Way. (oversized main)	$34,000	$34,000	$0	$0	$0	$0	$0	$0	$0	$5,552	$28,448
MWSI019	Lower Sacramento Road transmission main consisting of 5,200 lf 10-inch water main northerly to Kettleman Lane to the W.I.D. Canal. (oversized main)	$41,000	$41,000	$0	$0	$0	$0	$0	$21,000	$0	$3,268	$16,734
MWSX003	Kettleman/Lower Sacramento Road transmission mains (MWSI018 and MWSI019) also includ ing under the two existing roads. (cost sharing)	$13,000	$13,000	$0	$0	$0	$0	$0	$0	$0	$13,000	$0

TABLE 3 – 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MWSI020	Mills Avenue transmission main consisting of 1,400 lf 10–inch water main northerly from Kettleman Lane to W.I.D. Canal (oversized main)	$11,000	$11,000	$0	$0	$0	$0	$0	$0	$0	$11,000	$0
MWSX004	Mills Avenue transmission main (MWSI020) also includes construction of the main under the W.I.D. Canal. (cost sharing)	$9,000	$9,000	$0	$0	$0	$0	$0	$0	$0	$9,000	$0
MWSX005	Mills Avenue transmission main (MWSI020) also includes construction of the main under Kettleman Lane (cost sharing)	$9,500	$9,500	$0	$0	$0	$0	$0	$0	$0	$9,500	$0
MWSI021	Century Blvd transmission main consisting of 1,300 lf 10–inch water main westerly from Sage Way along future Century Blvd. alignment to join the existing main. (oversized main)	$5,000	$5,000	$0	$0	$0	$0	$0	$5,000	$0	$0	$0
MWSI022	Century Blvd. transmission main consisting of 2,760 lf 10–inch water main along future alignment from Lower Sacramento Road to general plan boundary. (oversized main)	$22,000	$22,000	$0	$0	$0	$0	$0	$0	$0	$3,592	$18,408
MWSX007	Century Blvd. transmission main (MWSI021) and MWSI022) also includes construction of the main under Lower Sacramento Road. (cost sharing)	$9,500	$9,500	$0	$0	$0	$0	$0	$0	$0	$0	$9,500

TABLE 3 – 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MWSI023	Future transmission main consisting of 2,800 lf 10–inch aligned between and parallel to Century and Harney, thence southerly from the canal to Harney. (oversize main)	$51,000	$51,000	$0	$0	$0	$0	$0	$0	$10,000	$41,000	$0
MWSI024	Harney Lane transmission main consisting of 7,900 lf 10–inch water main westerly from Hain Lane to the western boundary of the general plan area. (oversized main)	$33,000	$33,000	$0	$0	$0	$0	$0	$0	$0	$21,000	$12,000
MWSX006	Harney Lane transmission (MWSX021) includes construction of a 10–inch water line under the W.I.D. Canal (cost sharing)	$9,000	$9,000	$0	$0	$0	$0	$0	$0	$0	$9,000	$0
MWSX008	Harney Lane transmission main (MWSI024) includes construction of the main under Lower Sacramento Road. (cost share)	$9,500	$9,500	$0	$0	$0	$0	$0	$0	$0	$0	$9,500
MWSI025	Century Blvd. transmission main consisting of 1,080 lf 10–inch water main easterly from Stockton St. to Chickadee Lane. (oversized main)	$8,000	$8,000	$0	$3,886	$1,203	$1,225	$1,252	$434	$0	$0	$0
MWSI026	Cherokee/Harney transmission main consisting of 4,700 lf 10–inch water main easterly from SP railroad along Harney, thence, Northerly along Cherokee to Century Blvd. (oversized main)	$73,000	$73,000	$0	$35,458	$10,975	$11,186	$11,424	$3,957	$0	$0	$0

TABLE 3 – 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
WATER WELLS												
MWWI001	Installation of Water Well "A" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter	$723,000	$723,000	$0	$0	$0	$0	$0	$0	$723,000	$0	$0
MWWI002	Installation of Water Well "B" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	$723,000	$723,000	$0	$0	$0	$0	$0	$0	$0	$0	$723,000
MWWI003	Installation of Water Well "C" with pumping capacity of 1,600 GPM, a Granular Activated Carbon Filter, and Standby Power	$773,000	$773,000	$0	$0	$0	$0	$0	$0	$0	$0	$773,000
MWWI004	Installation of Water Well "D" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter	$723,000	$723,000	$0	$0	$0	$0	$0	$0	$0	$723,000	$0
MWWI005	Installation of Water Well "E" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	$723,000	$723,000	$0	$0	$0	$0	$0	$0	$0	$723,000	$0
MWWI006	Installation of Water Well "F" with pumping capacity of 1,600 GPM and Standby Power	$345,000	$345,000	$0	$0	$0	$0	$0	$0	$0	$345,000	$0
MWWI007	Installation of Water Well "G" with pumping capacity of 1,600 GPM.	$295,000	$295,000	$0	$295,000	$0	$0	$0	$0	$0	$0	$0

TABLE 3 – 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

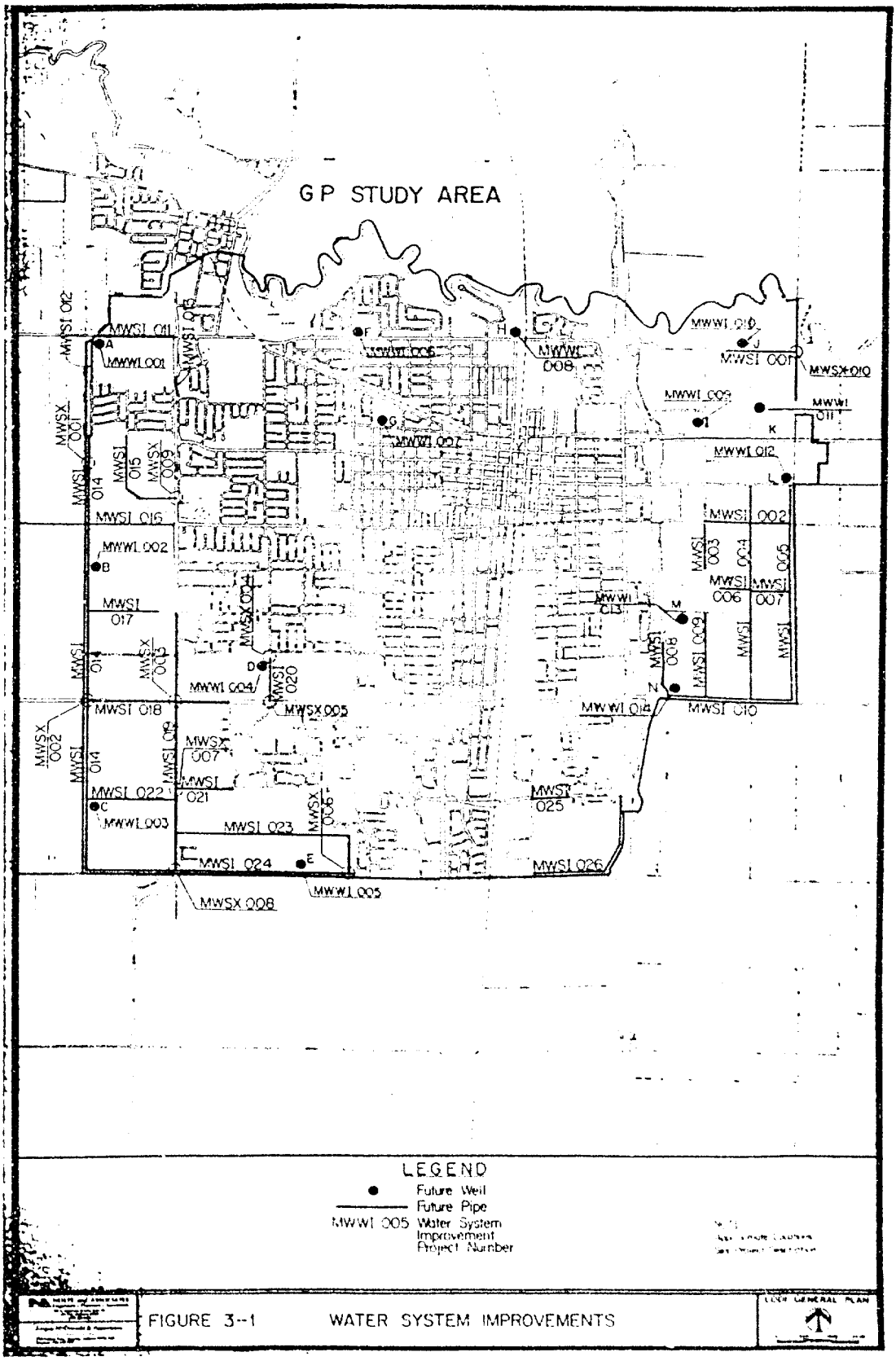
Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MWWI008	Installation of Water Well "H" with pumping capacity of 1,600 GPM and Standby Power.	$345,000	$345,000	$0	$0	$345,000	$0	$0	$0	$0	$0	$0
MWWI009	Installation of Water Well "I" with pumping capacity of 1,600 GPM and Standby Power.	$345,000	$345,000	$0	$0	$0	$0	$345,000	$0	$0	$0	$0
MWWI010	Installation of Water Well "J" with pumping capacity of 1,600 GPM.	$295,000	$295,000	$0	$0	$0	$295,000	$0	$0	$0	$0	$0
MWWI011	Installation of Water Well "K" with pumping capacity of 1,600 GPM.	$345,000	$345,000	$0	$0	$0	$0	$0	$345,000	$0	$0	$0
MWWI012	Installation of Water Well "L" with pumping capacity of 1,600 GPM and a Granular Activated Carbon Filter.	$723,000	$723,000	$0	$0	$0	$0	$0	$0	$0	$723,000	$0
MWWI013	Installation of Water Well "M" with pumping capacity of 1,600 GPM, a Granular Activated Carbon Filter, and Standby Power	$773,000	$773,000	$0	$0	$0	$0	$0	$0	$0	$0	$773,000
MWWI014	Installation of Water Well "N" with pumping capacity of 1,600 GPM.	$295,000	$295,000	$0	$0	$0	$0	$0	$0	$0	$0	$295,000

TABLE 3 – 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
WATER

Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
WATER CROSSINGS												
MWSO001	Water Master Plan–1990	$57,369	$57,369	$57,369	$0	$0	$0	$0	$0	$0	$0	$0
MWSO002	Water Master Plan and C.I.P. Update–1997	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$20,000	$0	$0
MWSO003	Water Master Plan and C.I.P. Update–2002	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$0	$20,000	$0
MWSO004	Public Works Admin. Bldg. Exp. (50%)	$341,500	$341,500	$0	$0	$341,500	$0	$0	$0	$0	$0	$0
MWSO005	Public Works Storage Facility (50%)	$235,000	$235,000	$0	$0	$0	$235,000	$0	$0	$0	$0	$0
MWSO006	Public Works Garage/Wash Facil.(33%)	$166,667	$166,667	$0	$166,667	$0	$0	$0	$0	$0	$0	$0
	Upgrades to Existing Facilities	$1,628,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	New Development Share of Existing Facilities											
	a. Water Storage Tank (31%)	$183,489	$183,489	$0	$11,468	$11,468	$11,468	$11,468	$11,468	$11,468	$57,340	$57,341
TOTAL WATER COST		$10,891,525	$9,263,525	$64,369	$543,194	$728,415	$562,307	$387,251	$437,841	$764,468	$2,782,037	$2,993,644


GP STUDY AREA
MWWL 001
MWWL 002
MWWL 003
MWWL 004
MWWL 005
MWWL 006
MWWL 007
MWWL 008
MWWL 009
MWWL 010
MWWL 011
MWWL 012
MWWL 013
MWWL 014
MWSI 001
MWSI 002
MWSI 003
MWSI 004
MWSI 005
MWSI 006
MWSI 007
MWSI 008
MWSI 009
MWSI 010
MWSI 011
MWSI 012
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MWSI 023
MWSI 024
MWSI 025
MWSI 026
MWSX 001
MWSX 002
MWSX 003
MWSX 004
MWSX 005
MWSX 006
MWSX 007
MWSX 008
MWSX 009
MWSX 010
LEGEND
Future Well
Future Pipe
MWWL 005 Water System Improvement Project Number
FIGURE 3-1 WATER SYSTEM IMPROVEMENTS

to future developed identified in the General Plan. Where the cost in the Program Cost and Impact Fee Fund columns are the same, the entire project cost has been allocated to future development. The usefulness of differentiating the costs will be evident in latter sections when Program Costs are to be funded by other sources or include costs to correct existing deficiencies.

At the end of Table 3-1, an item is listed as "New Development Share of Existing Facilities". This item summarizes already incurred City costs to construct projects with capacity reserved to serve future development. Depending on the project, a percentage of the actual construction cost has been allocated to future development as shown in parenthesis.

In the case of water service, the new water tank falls into the category of existing facilities serving future development. As indicated in Table 3-1, 31 percent of the actual construction cost adjusted to January 1990 dollars has been allocated.

Supply

Through buildout of the General Plan, the City will continue to rely upon groundwater as the sole water supply. Project average day demand at buildout is 22.1 million gallons per day. A total of 14 new wells will be required to supply to water to the General Plan area. Proposed locations of the new wells marked on Figure 3-1. Five of the new wells will be equipped with standby power generators.

Distribution System

Additional water mains will be required to distribute water to the area. With regard to funding water main extensions, the City is responsible only for water mains 10 inches and larger in diameter. Approximate location and limits of these water mains are shown on Figure 3-1. Actual location and alignment of the water mains may slightly change when site specific planning is completed.

Treatment

Two types of treatment are assumed to be provided at the wells sites: emergency chlorination and granular activated carbon filtration. Chlorination of the water is not routinely required, however, permanent chlorination facilities will be constructed at selected well sites. The cost of chlorination facilities (approximately $7,500 per well) is small compared to the cost of a well and is not listed separately. The totals for all wells include sufficient contingency to cover this expense at selected wells. It is assumed, granular activated carbon filtration units will be constructed at 5 of the 15 new wells.

ESTIMATED COSTS AND PHASING

In Table 3-1, a summary of the water projects and estimated costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4,673. Water main extension costs represent only the City's funding responsibility per the City Reimbursement Policy. In actual fact, the developer will be constructing the improvement and will receive back from the City a portion to cover the cost of oversizing the pipelines and the City's share (50%) of major crossings.

Phasing of the improvements is presented in Table 3-1 and is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. In Table 3-1, the phasing is divided by year for the first 7 years followed by two 5-year increments. Costs for projects serving General Plan development funded on or before July 1, 1990 are shown in the current year (1990/91). Actual costs of these projects have been adjusted to the January 1, 1990 dollars.

Many of the projects listed in Table 3-1 are oversizing projects wherein the City's participation is limited to reimbursement to the developer for oversizing costs. It is not intended that the Program Cost shown in the table reflect the total cost of construction. Similarly, for projects such as the Public Works building expansion, the costs have been divided between the water and sewer impact fee funds and the costs shown are the portion allocated to the water impact fee fund. Also, where a project partially serves the existing community and partially the general plan expansion areas, only the cost allocated to the general plan areas are shown.

DEVELOPMENT IMPACT FEE

Relationship of Water Projects to New Development

A reasonable relationship must be established between (1) a fee's use and (2) the type of development on which the fee is imposed. To establish such a relationship, it must be shown that the type of development that is going to be charged the fee actually uses, is served by, or benefits from the public facilities that are to be financed by the fee revenue.

Because of the logical growth patterns conceived in the Proposed General Plan and because of the planning effort set down in the Water Master Plan, the City ensures that all water facility improvements will primarily benefit the residential, commercial, industrial and quasi-public land uses within the General Plan area. Each and every water project to be financed by the fee program will provide the same level of service to the Proposed General Plan area as currently provided to the existing community of Lodi. Although other projects have been identified that will correct existing deficiencies, these project costs will not be included in the fee program.

Relationship of Water Projects to Land Uses

On the basis that all land uses will benefit from the facilities to be constructed, the burden of financing will be distributed to each land use in proportion to their use of, or benefit from, the improvements.

This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category. A summary of the RAE factors for water is presented in Table 3-2. The RAE schedule shows a reasonable relationship between the cost of the required water projects and financing burden placed on each land use.

Recommended Fees

A summary of water fees for each land use benefitting from the water projects is provided in Table 3-2. The total fee for low density residential use is $4,510 per acre.

TABLE 3-2

11-Apr-91

SUMMARY OF DEVELOPMENT IMPACT FEES
WATER

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$4,510
Medium Density	Acre	2.00	$9,010
High Density	Acre	3.50	$15,770
East Side Residential	Acre	1.00	$4,510
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$4,510
Medium Density	Acre	2.00	$9,010
High Density	Acre	3.50	$15,770
COMMERCIAL			
Neighborhood Commercial	Acre	0.64	$2,880
General Commercial	Acre	0.64	$2,880
Downtown Commercial	Acre	0.64	$2,880
Office Commercial	Acre	0.64	$2,880
INDUSTRIAL			
Light Industrial	Acre	0.92	$4,150
Heavy Industrial	Acre	0.92	$4,150
Industrial Reserve	Acre	0.92	$4,150

Note: Dollar amounts are in January 1, 1991 dollars.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 4

SEWER SERVICE

OVERVIEW

The City of Lodi has provided sewerage services to its residents since the early 1920's. Major facilities owned and operated by the City include a city-wide collection system, sewer trunks to the treatment plant, and the White Slough Water Pollution Control Facility located approximately 6 miles southwest of the City.

Collection System

The sanitary sewer collection system within the City includes more than 155 miles of pipeline. Sizes of the main sewers range from 4 to 48 inches in diameter, with 6 inches being the most common. Domestic and limited industrial wastewater flows (mainly the PCP Cannery and other industries along Sacramento Street) are kept separate. The separate industrial system is not addressed in this study.

Five sewer lift stations provide sewerage service to outlying areas of the City where conditions prohibit gravity systems. These existing lift stations are: Cluff Avenue Station, Mokelumne Village, Rivergate, Woodlake, and Park West.

Treatment and Disposal

White Slough Water Pollution Control Facility is owned and operated by the City. Currently, the plant is operating at the design capacity of 6.2 million gallons per day (MGD). Expansion of the plant to a capacity of 8.5 MGD is currently under construction. Future expansion to 10.3 MGD is planned.

Facility costs and financing for wastewater treatment and disposal are not addressed in this report. These issues have been addressed in separate studies and a financing mechanism, the Wastewater Connection Fee, has been established.

Master Sewerage Plan

Planning for sewerage collection facilities to serve the expanded General Plan area are addressed in the report by Black and Veatch, "Sanitary Sewer System, Technical Report for the 1990 General Plan Update." Included in the report are results of a comprehensive hydraulic evaluation of the existing collection system and proposed expansions of the collection system to serve an expanded City.

The Master Plan presents recommendations for gravity and pressure sewer design, sewer lift station design, and collection system maintenance. Recommendations for sizing and location of new facilities are presented that will serve the General Plan expansion areas as discussed in the section "Planned Sewerage Facilities". In addition, Master Plan identifies a number of collection system deficiencies that are described in the subsection, "Existing Deficiencies".

Sewer Reimbursement Policy

Commonly, developers are required to construct sewer trunk lines with greater capacity than needed in order to provide service to expanding areas of a community. It is not very common that a City or agency is able to get property owners to pay in advance for sewer capacity that they do not plan to use in the near future and, as a result, cities and agencies pay for the oversizing of sewer trunks. Policies for reimbursing for oversizing costs vary from community to community.

Under the City's Sewer Trunk Extension policy, applicants are reimbursed a portion of the estimated construction cost of oversize trunk sewers. For oversize trunks, the reimbursement policy applies to trunk sewers larger than 10 inches in diameter. For the purposes of this report, reimbursable construction costs are assumed to include materials, construction, administration, engineering and inspection. Administrative and engineering reimbursement is limited by City ordinance to 10%.

City reimbursement policy as it relates to oversizing of sewer trunk lines is reasonable. Historically, the oversize cost of gravity sewer lines has been spread throughout the City. In preparing this report, the existing policy and historic practice are assumed to continue in force during the General Plan period.

Existing Deficiencies

A number of existing sewers within the City are operating above design capacity as determined by the methods presented in the Master Sewerage Plan. Correction of the problem requires the construction of parallel sewers to relieve the surcharge condition. Listing of these sewers is presented in the Master Plan. Maintenance deficiencies within the collection system were also identified consisting primarily of sewer cleaning that had not regularly been performed in the past.

Based upon construction costs referenced to January 1, 1990 dollars, the estimated cost to construct those parallel relief sewers is $1,005,500. Estimated cost to clean the existing sewers is $165,000. Source of funding for these deficiencies has been identified by the City to be the Sewer Fund.

PLANNED SEWERAGE FACILITIES

Sewerage collection facilities to serve the expanded City have been identified in the Master Sewer Plan. A summary of these facilities is presented below and in Table 4-1. Project numbers listed in Table 4-1 are used to identify the project locations as shown on Figure 4-1.

Collection System

Expansion of the existing collection system to serve new areas will require construction of new gravity sewers and lift stations as described in Table 4-1 and shown on Figure 4-1. Two new lift stations and expansion of an existing lift station are planned; one near Kettleman Lane (Highway 12), a second near Harney Lane, and expansion of the existing Cluff Avenue Lift Station. Additional gravity sewer trunks will be required to serve the General Plan areas. Only those trunk lines that are larger than 10 inches in diameter are considered in this report and are listed in Table 4-1.

Sewer collection facilities can be divided into two categories: gravity facilities and pressure facilities. As previously mentioned, City policy has historically provided for reimbursement of oversize gravity facilities and for payment of oversizing costs from the Sewer Fund, thereby, spreading the costs City-wide. Pressure facilities costs (i.e. lift stations and force mains) have been spread over areas of benefit. For each lift station in the City a specific area of benefit is defined. In this report, it is assumed that lift station and force main costs would be spread over individual special fee areas corresponding to the areas of benefit. Also, it is assumed that gravity facilities costs would be spread City-wide and oversizing costs for facilities serving future growth would be paid from development impact fee funds.

Treatment and Disposal

Expansion of the White Slough Water Pollution Control Facility is currently under construction. Costs of the expansion and future planned expansions are not considered in this report. Funding for these improvements has been arranged by the City and reimbursement will come from rates and the City Wastewater Connection Fees collected at the time of building permit issuance.

ESTIMATED COSTS AND PHASING

In Table 4-1, a summary of the sewer projects and estimated costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Sewer trunk extension costs reflect only the City's funding responsibility per the City Reimbursement Policy and do not reflect the total estimated construction cost.

Phasing of the improvements is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. In

TABLE 4 - 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

SEWER

Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSSI001	Beckman Road sewer trunk comprising 1,100 lf of 10-inch sanitary sewer pipe and manholes from Pine Street to Lodi Avenue.	$49,000	$49,000	$0	$0	$0	$0	$0	$0	$0	$0	$49,000
MSSI002	Western boundary sewer trunk consisting of 500 lf, 12-inch, 500 lf 15-inch, 2,000 lf of 18-inch, 2,000 lf of 21-inch, and 2,500 lf of 24-inch sewer pipe connecting to the existing 48 inch sewer trunk to the treatment plant. (oversize)	$300,000	$300,000	$0	$0	$0	$0	$0	$0	$0	$0	$300,000
MSSI003	Oversize gravity sewer to Harney Lane lift station comprising 2,700 lf of 12-inch and 1,000 lf of 15-inch sewer trunk.	$48,000	$48,000	$0	$0	$0	$0	$0	$0	$0	$48,000	$0
MSSI004	Harney Lane lift station and force main comprising 3-ten horsepower pumps having a combined 1,000 GPM capacity and 2,600 lf of 8-inch pipe.	$262,500	$0 (1)	$0	$0	$0	$0	$0	$0	$0	$0	$0
MSSI005	Kettleman Lane lift station and force main with 2-five horsepower pumps and 450 GPM capacity and short force main under Kettleman Lane.	$192,000	$0 (2)	$0	$0	$0	$0	$0	$0	$0	$0	$0
MSSI006	Cluff Avenue lift station upgrade and parallel force main with 2 fifteen horsepower pumps and a 1,500 GPM capacity	$185,000	$0 (3)	$0	$0	$0	$0	$0	$0	$0	$0	$0
MSSI007	1,400 lf of 18-inch parallel trunk line in Lower Sacramento Rd. from Taylor Rd. to Kettleman Lane	$42,000	$42,000	$0	$0	$0	$0	$0	$0	$0	$42,000	
MSSI008	2,500 lf of 15-inch parallel trunkline in Lower Sacramento Rd from Lodi Avenue to Elm Street	$49,000	$49,000	$0	$0	$0	$0	$0	$49,000	$0	$0	$0

TABLE 4 – 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

SEWER

Project Number	Description	Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSSI009	Oversize gravity sewer in Harney Lane to lift station, consisting of 1,400 lf of 12-inch pipe west from Lower Sacramento Road. (oversize)	$15,000	$15,000	$0	$0	$0	$0	$0	$0	$0	$15,000	$0
GCFI006	Public Works Administration Bldg. Expansion. (50%)	$341,500	$341,500	$0	$0	$341,500	$0	$0	$0	$0	$0	$0
GCFI007	Public Works Storage Facility (50%)	$235,000	$235,000	$0	$0	$0	$235,000	$0	$0	$0	$0	$0
GCFI008	Pub. Works Garage/Wash Facil. (33%	$166,667	$166,667	$0	$166,667	$0	$0	$0	$0	$0	$0	$0
MSSO001	Sewer Master Plan – 1990	$82,753	$82,753	$82,753	$0	$0	$0	$0	$0	$0	$0	$0
MSSO002	Sewer Master Plan and C.I.P. Update – 1997	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$20,000	0	$0
MSSO003	Sewer Master Plan and C.I.P. Update – 2002	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$0	$20,000	$0
	Upgrades to Existing Facilities	$1,005,500	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL SANITARY		$3,013,920	$1,368,920	$82,753	$166,667	$341,500	$235,000	$0	$49,000	$20,000	$125,000	$349,000

Notes:

1. Harney Lane lift station costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 1997-2002 period.
2. Kettleman Lane lift station costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 1992-1993 period.
3. Cluff Avenue lift station modification costs will be funded by a Supplemental Fee assessed upon development within the area of benefit. Therefore, costs of the projects are not shown in the City-Wide Impact Fee Fund column. Forecasted timing of the project construction is in the 2002-2007 period.

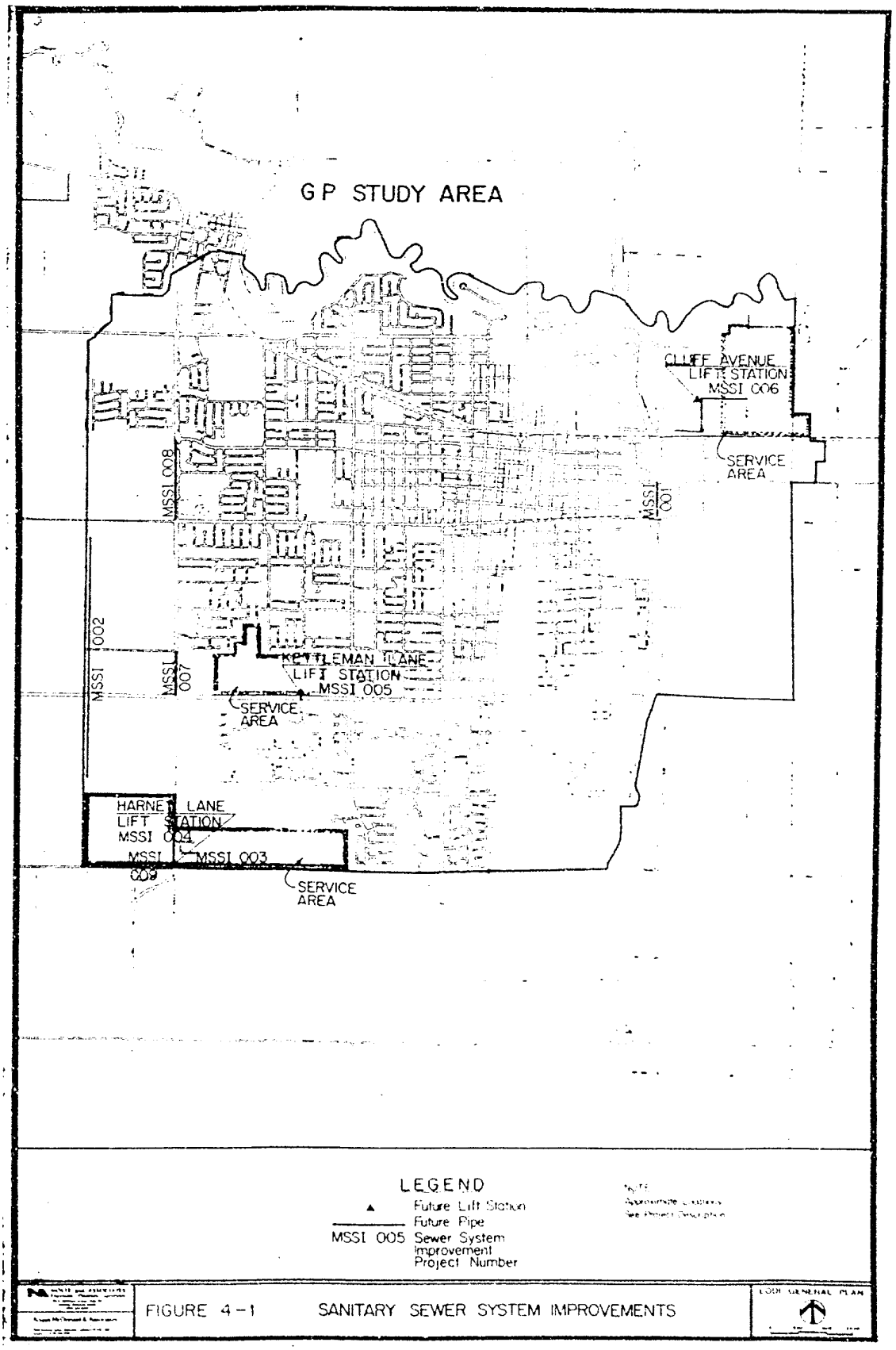

GP STUDY AREA
CLIFF AVENUE
LIFT STATION
MSSI 006
SERVICE
AREA
MSSI 008
MSSI 001
MSSI 002
MSSI 007
KETTLEMAN LANE
LIFT STATION
MSSI 005
SERVICE
AREA
HARNEY LANE
LIFT STATION
MSSI 004
MSSI 009
MSSI 003
SERVICE
AREA
LEGEND
Future Lift Station
Future Pipe
MSSI 005 Sewer System Improvement Project Number
FIGURE 4-1
SANITARY SEWER SYSTEM IMPROVEMENTS

Table 4-1, the phasing is divided by year for the first 7 years followed by two 5-year increments. Costs for the projects serving the General Plan development funded on or before July 1, 1990 are shown in the current year (1990/91). Actual costs of these projects have been adjusted to the January 1, 1990 dollar reference.

Some projects listed in Table 4-1 are not included in the overall development impact fee program. These include projects related to serving the Cluff Avenue Lift Station Service Area, the Harney Lane Lift Station Service Area and the Kettleman Lane Lift Station Service Area. Since lift stations are unusually large and expensive facilities and, the service area is specific, a separate supplemental fee is calculated for each area. A separate calculation for these sub-zones is presented in the section, BURDEN ANALYSIS FOR SEWER SUB-ZONES.

Relationship of Sewer Projects to New Development

A reasonable relationship must be established between: (1) the fee's use and; (2) the type of development on which the fee is imposed. To establish such a relationship, it must be shown that the type of development that is going to be charged the fee actually uses, is served by, or benefits from the public facilities that are to be financed by the fee revenue.

Sewer collection facilities are used by residential, commercial, industrial and quasi-public land uses. Benefit to each land use is based upon peak wastewater generation rates as set forth in the Sewer Master Plan. Because each land use mentioned above benefits from the sewer projects in the capital improvements program, each land use is also a part of the fee program.

Relationship of Sewer Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category.

According to the definition of RAE's an acre of low density single family residential land sue has an RAE factor of 1.0. All other land use categories have RAE factors that relate their demand for sewerage facilities relative to one acre of low density single family land use. Based upon wastewater flow projections presented in the City's Sewer Master Plan for each land use in the General Plan, an RAE schedule has been developed. The RAE schedule shows a reasonable relationship between the cost of required Sewer Facilities projects and the burden placed on each land use. The RAE schedule that has been developed for the Sewer Facilities is presented in Table 4-2.

TABLE 4-2

11-Apr-91

SUMMARY OF DEVELOPMENT IMPACT FEES
SEWER

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$1,080
Medium Density	Acre	2.00	$2,160
High Density	Acre	3.50	$3,790
East Side Residential	Acre	1.00	$1,080
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$1,080
Medium Density	Acre	2.00	$2,170
High Density	Acre	3.50	$3,790
COMMERCIAL			
Neighborhood Commercial	Acre	1.25	$1,350
General Commercial	Acre	1.25	$1,350
Downtown Commercial	Acre	1.25	$1,350
Office Commercial	Acre	1.25	$1,350
INDUSTRIAL			
Light Industrial	Acre	0.33	$360
Heavy Industrial	Acre	0.33	$360
Industrial Reserve	Acre	0.33	$360

Note: Dollar amounts are in January 1, 1991 dollars.

Sources: Nolte & Associates and Angus McDonald & Associates.

Recommended Fees

The Sewer Facilities Fees for each land use are summarized in Table 4-2. The total fee is $1,080 per low density residential acre.

BURDEN ANALYSIS FOR SEWER SUB-ZONES

There are three sewer sub-zones which are not served by the improvements in the fee program and cannot be funded by the sewer development impact fee. These areas require lift stations and other improvements that will benefit only a specific area of undeveloped land. The sub-zones are the Kettleman Lift Station Area, Harney Lane Lift Station Area, and the Cluff Avenue Lift Station Area. Each area has only one land use type within its boundaries. Since the improvements will have to be constructed prior to any development taking place, development impact fees do not provide a viable means to finance these projects.

The total cost of lift station facilities equals $639,500. In practice, this amount would best be obtained by borrowing from another City of Lodi fund. A special sub-area Impact Fee could then be collected in the three sewer sub-zones sufficient to repay the borrowing plus an appropriate rate of interest.

The alternative, three sub-area financing districts (Special Assessment Districts or Mello-Roos Community Facilities Districts) would not be economic. The cost of processing would be excessive compared to the funds required.

Other alternatives include financing by the "first" development in the area with establishment of a reimbursement program from future development, or the installation of temporary facilities plus payment of the fee. Each case should be evaluated separately as development is proposed.

A series of analyses presenting the burden of financing the improvements in each of these sub-zones is provided in Table 4-3. The calculations indicate the approximate amount each acre of land in each sub-zone will need to contribute in order to finance the needed improvements. It should be noted that the cost of financing has not been included.

In the case of the Harney Lane lift station service area, existing development has been included in the sizing of the facilities. At the time of annexation, it is expected that this area will be required to pay the supplemental fee and, therefore, it has been included in the supplemental fee calculation.

TABLE 4-3

SEWER SUB-ZONE FEE CALCULATIONS

Kettleman Lift Station Sub-Zone

Total Planned Residential Acres: 100

Total Cost of Improvements: $192,000

Cost Per RAE: $ 1,555

Description	Units	Total Developed	RAE Factor	Total RAEs	Total Burden Per Acre
PR - Low Density	Acres	87.0	1.0	87	$ 1,555
PR - Medium Density	Acres	6.0	2.0	12	$ 3,109
PR - High Density	Acres	7.0	3.5	24.5	$ 5,441
		100		123.5	

Harney Lane Lift Station Sub-Zone

Total Planned Residential Acres: 257

Total Cost of Improvements: $262,500

Average Cost Per RAE: $ 827

Description	Units	Total Developed	RAE Factor	Total RAEs	Total Burden Per Acre
PR - Low Density	Acres	187.1	1.0	187	$ 827
PR - Medium Density	Acres	12.9	2.0	26	$ 1,654
PR - High Density	Acres	15.1	3.5	53	$ 2,895
		215		266	

Cluff Avenue Lift Station Sub-Zone

Total Industrial Reserve Acres: 158

Total Cost of Improvements: $185,000

Average Cost Per RAE: $ 1,171

Description	Units	Total Developed	Factor	RAE's	Total Burden Per Acre
Industrial/ Industrial Reserve	Acres	158	0.33	52	$ 1,171

Note: Dollar amounts are in January 1, 1990 dollars

Source: Nolte and Associates and Angus McDonald and Associates, 1991.

CHAPTER 5

STORM DRAINAGE

OVERVIEW

Storm drainage services are provided by the City of Lodi. Major features of the storm drainage system include collection system, runoff storage/detention facilities, and pumping plants. Terminal drainage for the City is provided by the Mokelumne River and the Woodbridge Irrigation District (WID) canal. Characteristics of these facilities are described below.

Collection System

Storm drainage services are provided to an area encompassing approximately 7,700 acres. For facility planning purposes, the drainage area has been divided into planning areas. Storm drainage facilities for these planning areas are incorporated into a City wide storm drainage facilities plan. Approximately 1,340 acres directly discharge to the Mokelumne River via gravity pipelines. Approximately another 2,290 acres is pumped to the river. The remaining approximately 4,070 is pumped to the WID canal from two pump stations.

Discharges to the WID canal are controlled by the flow capacity of the canal system. By agreement, the City is limited to a combined total discharge of 80 cubic feet per second at the two existing pumping stations. Additional discharge locations are not currently permitted by the agreement. The City operates a series of interconnected detention basins within this area to store runoff prior to pumping to the canal. The City utilizes detention basins in other areas also to store runoff prior to pumping to the Mokelumne River.

Existing facilities for the collection of storm runoff include surface improvements like alleys, ditches and gutters, and underground pipelines. Present design standards for storm drainage collection facilities only allow gutter and underground piping. The use of ditches and alleys for conveyance of storm runoff is currently substandard and not allowed.

New development in the City is required to construct all storm pipeline smaller than 30 inches in diameter. Pipelines 30 inches and larger are considered to be part of the Master Storm Drain Plan improvements and are currently funded by Storm Drainage Fees collected by the City.

A number of relatively minor deficiencies exist within the collection system. For the most part, these consist of substandard surface drainage facilities (for example, ditches and alleys), deteriorated curb and gutter, and undersized pipelines and catch basins. Many of the system deficiencies can be found in the older central and eastern parts of the City.

Large scale replacement of deficient facilities, if it occurs, will be part of major street reconstruction projects. As part of the East Side Residential Study (1987), a number of Storm Drainage deficiencies were identified. Estimated total cost to correct the deficiencies was $854,000 in 1987 dollars and $930,000 in 1990 dollars. Small scale projects have been performed by the City to repair sections of curb and gutter. Replacement of the alley systems is not expected due to high cost and grade conditions.

Detention Basins

As mentioned above, the City operates a system of interconnected detention basins that store runoff prior to pumping to the WID canal or the Mokelumne River. These basins also function as park-like areas when not utilized for storage of storm runoff.

A total of eight basins exist within the City's drainage service area. Basins in subareas C (Pixley Park), B (Glaves Park), and E (Westgate Park) store runoff prior to discharge to the Mokelumne River. Basins in subareas A-1 (Kofu Park), A-2 (Beckman Park), B-1 (Vinewood School), D (Salas Park), and G (along with the future F and I basins) store runoff prior to discharge to the WID canal from pumping stations located on Cabrillo Circle and at Beckman Park.

Current design standards for the detention basins require storage capacity for the 100-year 48-hour storm. Changes in hydrologic design data over the past years may have resulted in some earlier basins being undersized. Future updates of the Master Storm Drainage Plan will address this issue.

Master Storm Drainage Plan

City of Lodi Engineering Division updated the Master Storm Drainage Plan in 1988. This plan forms the principal basis for future expansions of the drainage service area to serve the General Plan area. Major collection system improvements and detention basin improvements are identified in the plan that have been included in this report.

Master Storm Drainage Fee

The City has adopted a capital improvement program and fee-based financing mechanisms for storm drainage facilities. Recently, this program was revised to comply with AB 1600 regulations. This study updates the program and fee to serve the General Plan Area. Also, additional fee categories have been created from the former drainage fee to establish general conformance with the other fee categories.

PLANNED STORM DRAINAGE IMPROVEMENTS

Storm drainage improvements to serve buildout of the General Plan were, for the most part, identified in the Master Storm Drainage Plan. A summary of

those facilities is presented below and summarized in Table 5-1. Project numbers listed in Table 5-1 are used to identify the location of projects shown on Figure 5-1.

Collection System

Drainage subareas established during planning for storm drainage improvements within the existing City limits had already incorporated much of the land in the expanded General Plan area. Subareas C, D, E, F and G were already planned for expansion of service to the west, east and south. New subarea I will be established to provide drainage services to areas west of Lower Sacramento Road, south of Kettleman Lane.

Major storm drainage trunk pipes are planned to serve the expanded General Plan area. Locations of these trunk improvements are shown on Figure 5-1.

Detention Basins

Expansion of existing detention basins in subareas C, E, and G are identified in the Master Plan. New detention basins are planned for subareas F and I.

ESTIMATED COSTS AND PHASING

In Table 5-1, a summary of the storm drainage projects and estimated construction costs is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Average Construction Cost Index for January 1, 1990 of 4673. In the table, reference is made to Program Cost and Impact Fee Fund. Program Costs are defined for Storm Drainage Facilities to be the total probable construction cost for the facilities described. In other words, the private developer is not expected to pay any portion of the cost to construct Master Storm Drainage Facilities. Impact Fee Fund costs represent the portion of Program Costs allocated to serve future growth or otherwise not funded from other sources. In the case of Storm Drainage, all Master Planned Facilities are wholly serving future growth and no funding other than development impact fees is expected. Therefore, the amount in the Program Cost column generally equals the amount in the Impact Fee Fund column. The exception is the item labeled "Deficiencies". Storm drainage trunk lines represent the total estimated cost of construction.

Phasing of the storm drainage improvements presented in Table 5-1 and is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. Costs for projects serving General Plan development funded on or before July 1, 1990 are shown in the current year (1990/91). Actual costs of these project have been adjusted to the base dollar of January 1, 1990.

TABLE 5 - 1

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

STORM DRAINAGE

04/11/91

Project Number		Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSDI001	Pixley Park drainage basin. Expansion and development of Basin "C" according to plan adopted in 1988 (Dwg 88E003)	$693,000	$693,000	$0	$0	$177,000	$0	$0	$0	$222,000	$294,000	$0
MSDI003	Turner Road storm drain. 650 lf of 60", 800 lf of 54", and 1,150 lf of 42" storm drains in Turner Road and Guild Avenue.	$213,000	$213,000	$0	$0	$0	$0	$0	$0	$0	$0	$213,000
MSDI004	Pine Street storm drain consisting of 800 lf of 30" storm drain and manholes.	$42,000	$42,000	$0	$0	$0	$0	$0	$0	$0	$42,000	$0
MSDI005	Thurman Street storm drain consisting of 1,250 lf 36" storm drain and manholes.	$70,000	$70,000	$0	$30,000	$0	$0	$0	$0	$0	$40,000	$0
MSDI007	Basin "C" storm drain collection facilities consisting of 42" and 30" pipes, extending south and east. Expands service area to Kettleman and Guild.	$172,000	$172,000	$0	$0	$0	$0	$0	$0	$0	$0	$172,000
MSDI008	Evergreen Drive storm drain collection facilities extending service area north to Turner Road. Improvements include pipes that will carry runoff to Basin "E".	$129,000	$129,000	$0	$0	$0	$0	$43,000	$43,000	$43,000	$0	$0
MSDI009	Evergreen Drive storm drain collection facilities extending service south of E-basin. Improvements include 30" and 36" pipes that will carry runoff to Basin "E".	$63,000	$63,000	$0	$0	$0	$21,000	$21,000	$21,000	$0	$0	$0

TABLE 5 – 1

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

STORM DRAINAGE

04/11/91

Project Number		Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MSDI010	Westgate Park expansion and development. Park improvements are not included	$1,934,000	$1,934,000	$0	$0	$0	$1,343,000	$157,000	$157,000	$277,000	$0	$0
MSDI011	Development of new Basin "F", located north of Kettleman Lane and west of Lower Sacramento Road. Service area includes land west of Lower Sacramento Road, north of Kettleman, and south of the WID canal. Park improvements are not included	$3,519,000	$3,519,000	$0	$0	$0	$0	$0	$0	$0	$2,532,000	$987,000
MSDI012	Basin "F" storm drain collection facilities extending north of Basin "F" including 54", 48", and 30" pipes.	$367,000	$367,000	$0	$0	$0	$0	$0	$0	$0	$0	$367,000
MSDI013	Storm drain consisting of 36" and 30" pipes extending easterly from the existing 54" trunk line north of Kettleman Lane. Exact location not yet determined.	$149,000	$149,000	$0	$0	$0	$0	$0	$0	$0	$149,000	$0
MSDI014	Basin "F" outfall storm drain consisting of 30" pipes extending easterly from the basin to the existing 54" trunk line.	$184,000	$184,000	$0	$0	$0	$0	$0	$0	$0	$184,000	$0
MSDI015	Basin "G" storm drain collection facilities consisting consisting of 48" and 36" pipes extending southerly and easterly from Basin "G". Exact location not yet determined	$261,000	$261,000	$0	$0	$0	$0	$0	$0	$0	$261,000	$0

TABLE 5 - 1

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

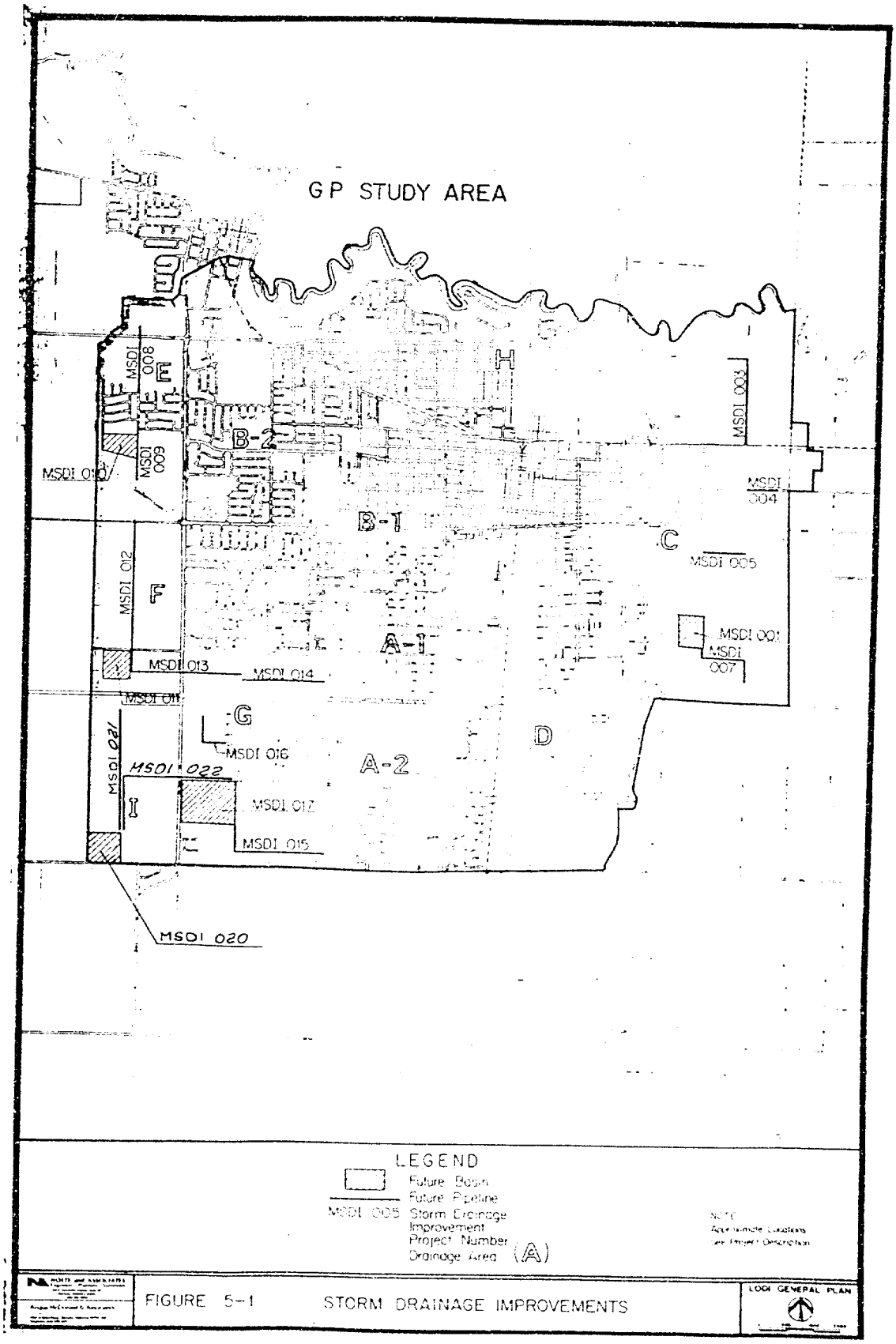
STORM DRAINAGE

04/11/91

Project Number		Program Cost	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MSDI016	Basin "G" collection facilities consisting of 36" and 30" pipes extending westerly and northerly of the existing 36" trunk in Orchis Way. Exact location not yet determined.	$64,000	$64,000	$64,000 (1)	$0	$0	$0	$0	$0	$0	$0	$0
MSDI017	Expansion and development of Basin "G". Golf course improvements are not included.	$3,744,000	$3,744,000	$108,000 (1)	$0	$0	$0	$0	$0	$396,000	$3,240,000	$0
MSDI018	Master Plan/Updates	$50,000	$50,000	$10,000 (1)	$0	$0	$0	$0	$0	$20,000	$20,000	$0
MSDI020	Development of Basin "I" located south of Kettleman Lane and west of Lower Sacramento Road.	$3,619,000	$3,619,000	$0	$0	$0	$0	$0	$0	$0	$0	$3,619,000
MDSI021	Basin "I" collection facilities consisting of 30, 36, 42, and 48 inch pipes extended north of the basin.	$225,000	$225,000	$0	$0	$0	$0	$0	$0	$0	$0	$225,000
MDSI022	Basin "I" discharge consisting of 42 inch pipe extending north and east to Basin "G".	$275,000	$275,000	$0	$0	$0	$0	$0	$0	$0	$0	$275,000
	Upgrades to Existing Facilities	$1,051,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL STORM DRAINAGE COST:		$16,824,000	$15,773,000	$182,000	$30,000	$177,000	$1,364,000	$221,000	$221,000	$958,000	$6,762,000	$5,858,000

NOTE:

(1) Previously Appropriated from Drainage Fees


GP STUDY AREA
MSDI 008
MSDI 009
MSDI 010
MSDI 012
MSDI 013
MSDI 014
MSDI 011
MSDI 021
MSDI 022
MSDI 016
MSDI 017
MSDI 015
MSDI 020
MSDI 003
MSDI 004
MSDI 005
MSDI 001
MSDI 007
E
F
B-2
B-1
H
C
A-1
G
A-2
D
I
LEGEND
Future Basin
Future Pipeline
MSDI 005 Storm Drainage Improvement Project Number
Drainage Area (A)
NOTE
Approximate Locations
See Project Description
FIGURE 5-1 STORM DRAINAGE IMPROVEMENTS
LODI GENERAL PLAN

Relationship of Storm Drainage Projects to New Development

A reasonable relationship must be established between the projects and improvements funded by the fee and the type of development upon which the fee is imposed. Essentially, it is incumbent upon the City to show that the development is served by and/or benefits from the public facilities to be financed by the fee revenue.

City of Lodi Storm Drainage Master Plan presents a soundly conceived and comprehensive plan for providing storm drainage services to all areas of the General Plan. Only those improvement costs benefitting the areas included in the fee program are included in the fee program.

Relationship of Storm Drainage Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use category in relation to the single family detached residential category.

The concept of RAE is based upon defining a base demand that, in this case, is selected to be an acre of low density single family detached dwelling units. The base acre has an assigned RAE of 1.0 . All other land use categories have RAE factors that show their relative demand for Storm Drainage Facilities compared to the base acre of low density single family housing.

Based upon the cost of facilities to provide comparable levels of service to residential and commercial/industrial areas, the City has adopted a commercial/industrial fee that is 1.33 times the residential fee. Following a review of the methodology employed by the City, it is concluded the methodology is reasonable and fairly compares the demand for storm drainage facilities by the various land uses. Therefore, the City adopted (and defacto) RAE schedule is incorporated into this study.

Recommended Fees

The Storm Drainage Facilities Fee is shown in Table 5-2. The total fee is $7,170 per low density residential acre.

TABLE 5-2

15-Apr-91

SUMMARY OF DEVELOPMENT IMPACT FEES
STORM DRAINAGE

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$7,380
Medium Density	Acre	1.00	$7,380
High Density	Acre	1.00	$7,380
East Side Residential	Acre	1.00	$7,380
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$7,380
Medium Density	Acre	1.00	$7,380
High Density	Acre	1.00	$7,380
COMMERCIAL			
Neighborhood Commercial	Acre	1.33	$9,820
General Commercial	Acre	1.33	$9,820
Downtown Commercial	Acre	1.33	$9,820
Office Commercial	Acre	1.33	$9,820
INDUSTRIAL			
Light Industrial	Acre	1.33	$9,820
Heavy Industrial	Acre	1.33	$9,820
Industrial Reserve	Acre	1.33	$9,820

Note: Dollar amounts are in January 1, 1991 dollars.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 6

STREETS AND ROADS

OVERVIEW

For as long as the City of Lodi has been in existence, streets and roads have been the primary system used in intercity travel. With the change in City-wide growth, there welcome a need to improve the streets and roads in the community. The Draft General Plan will expand the City and additional traffic will be generated within the community. As a result new streets will be needed and existing streets will need to be improved. The following sections will describe these improvements, the City obligation for funding, and the fees calculated to reimburse the City costs.

Existing Traffic Conditions

Existing traffic counts were collected by the City of Lodi Public Works Department in 1987 at numerous locations throughout the City by the City and their traffic consultant. The data were used to establish the current Level of Service (LOS) within the project study area. Currently, roadways and intersections throughout the City are operating at a LOS of C or better with the exception of Hutchins Street/Kettleman Lane intersection, which operates at a LOS D. The City of Lodi considers C to be the standard level of service with anything less considered to be substandard.

Circulation Plan

In December of 1989, a City-wide circulation study was prepared by the Traffic Consultant, TJKM, that identified the impacts associated with the envisioned General Plan. As mentioned earlier, the existing traffic counts were done by the City's staff. Incorporating this information along with using a computer based travel demand model, TJKM was able to forecast future traffic conditions throughout the project study area. Based upon these forecasts, road sections of future streets and improvements to existing streets were identified.

A listing of general street, intersection, signalization, and interchange improvements was submitted to the City along with the circulation study. Working with City staff and the City improvement standards, cross-sections were prepared for future streets and improvements to existing streets. These are discussed in the following section.

Existing Deficiencies

Existing deficiencies are relatively minor and mainly consist of deteriorated pavement, and curb and gutter and drainage facilities on some streets. Project costs to correct existing deficiencies are not funded by development impact fees unless the correction is incidental to providing higher capacity

to serve future growth. For example, Lockeford Street between the Southern Pacific Railroad and Cherokee Lane needs to be widened to four lanes and this project is included in the fee program. Incidental to widening Lockeford Street, curb and gutter will be reconstructed along the widened stretch.

Reconstruction, overlays and other maintenance activities are not included in the fee program. Funding for these activities is derived from the general fund, gas taxes, TDA, Proposition 111 gas tax, Measure K sales tax, and other sources. Typically, general fund allocations are strictly used for operations and maintenance (O & M) activities. Funds from other sources are allocated to O and M, capital and reconstruction activities.

Based upon the current budget for capital maintenance and reconstruction of $1.66 million, a forecast was prepared for the program cost for similar work during the General Plan period. The total is shown in Table 6-1 as Enhancements to Existing Facilities in the amount of $26.56 million. Funding for these program costs is anticipated to come primarily from General Fund, Gas Tax and Transportation Development Act (TDA) sources in proportion to existing funding levels of 52%, 26%, and 22%, respectively.

PLANNED CIRCULATION IMPROVEMENTS

Presently, the City policy toward funding street and road improvements applies only to limited access expressways such as Lower Sacramento Road and South Hutchins Street and widenings to existing streets. Based upon current State law and common practice in other agencies regarding impact fees and developers' requirements, it is recommended that present policy be changed. The following section describes the recommended policy and how it is implemented in this fee program.

Developer Required Improvements

For all projects within the City, the developer is required to build streets to serve the project. Relative to street improvements, the developer is required to provide all improvements and dedicate all right-of-way for one half width street consisting of curb, gutter, sidewalk, one travel lane and a shoulder or parking lane. Maximum right-of-way dedication is 34 feet and is dependent upon existing right-of-way at the improvement location. Improvements required of the developer include 5.5 feet of curb and sidewalk, 2 feet of gutter, and 24 feet of paving that corresponds to those designated as a major collector. Typical section for a major collector is provided in Figure 6-1. In the case where development occurs on one side of a major collector, the developer typically is required to construct only one-half of the street. In the case where development occurs along a street having a greater designated capacity than a major collector, the development impact fee funds or other funds will be used to construct the more extensive improvements. Examples of these streets include: Kettleman Lane, Harney Lane, Century Boulevard, and Lower Sacramento Road.

TABLE 6-1

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

STREETS AND ROADS

04/11/91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTSI001	Restriping of Kettleman Lane (6 - Lanes, Divided) from Lower Sacramento Road to Ham Lane.	$22,000	$22,000	$0	$0	$0	$0	$0	$0	$0	$22,000	$0
MTSI002	Restriping of Kettleman Lane (6 - Lanes, Divided) from Ham Lane to Stockton Street.	$22,000	$22,000	$0	$0	$0	$0	$0	$0	$22,000	$0	$0
MTSI003	Restriping of Kettleman Lane (6 - Lanes, Divided) from Stockton Street to Cherokee Lane.	$12,000	$12,000	$0	$0	$0	$0	$0	$0	$12,000	$0	$0
MTSI004	Design, construction and engineering associated with widening Kettleman Lane (Highway 12) @ State Route 99 (Measure "K" Funding = $700,000)	$3,106,000	$3,575,000	$0	$0	$0	$0	$0	$0	$0	$0	$3,575,000
MTSI005	Widening of Kettleman Lane (4 - Lanes, Divided) from Beckman Road to Guild Avenue	$519,000	$519,000	$0	$0	$0	$0	$259,500	$0	$0	$0	$259,500
MTSI006	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Turner Road to Lodi Avenue (Measure "K" Funding = $185,250)	$463,250	$278,000	$0	$0	$0	$0	$0	$30,580	$47,260	$200,160	$0
MTSI007	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Elm Street to Taylor Road. (Measure "K" Funding = $130,000)	$325,000	$195,000	$0	$0	$0	$0	$0	$21,450	$33,150	$140,400	$0
MTSI008	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Taylor Road to Kettleman Lane. (Measure "K" Funding = $91,000)	$228,000	$137,000	$0	$0	$0	$0	$0	$0	$0	$137,000	$0

TABLE 6-1

04/11/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTSI009	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Kettleman Lane to Orchis Drive. (Measure "K" Funding = $94,250)	$235,250	$141,000	$0	$0	$0	$0	$0	$0	$0	$141,000	$0
MTSI010	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Orchis Drive to Century Blvd. (Measure "K" Funding = $78,000)	$195,000	$117,000	$0	$0	$0	$0	$0	$0	$0	$117,000	$0
MTSI011	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Century Blvd. to Kristen Court. (Measure "K" Funding = $120,250)	$300,250	$180,000	$0	$0	$0	$0	$0	$0	$0	$0	$180,000
MTSI012	Widening of Lower Sacramento Road (6 - Lanes, Divided) from Kristen Court to Harney Lane. (Measure "K" Funding = $52,000)	$130,000	$78,000	$0	$0	$0	$0	$0	$0	$0	$0	$78,000
MTSI013	Widening of Harney Lane (4 - Lanes) from Lower Sacramento Road East 2,650 feet	$173,000	$173,000	$0	$0	$0	$0	$0	$0	$0	$173,000	$0
MTSI014	Widening of Harney Lane (4 - Lanes) from W.I.D. crossing West 2,650 feet	$173,000	$173,000	$0	$0	$0	$0	$0	$0	$0	$173,000	$0
MTSI015	Widening of Harney Lane (4 - Lanes) from W.I.D. crossing East 2,250 feet.	$120,000	$120,000	$0	$0	$0	$0	$0	$0	$0	$120,000	$0
MTSI016	Widening of Harney Lane (4 - Lanes) from Hutchins Street to Stockton Street.	$120,000	$120,000	$0	$0	$0	$0	$0	$0	$0	$120,000	$0
MTSI017	Widening of Harney Lane (4 - Lanes) from Stockton Street to Cherokee Lane.	$147,000	$147,000	$0	$0	$0	$0	$0	$0	$0	$147,000	$0

TABLE 6-1

04/11/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTSI018	Widening of Harney Lane (4 - Lanes) from Lower Sacramento Road to the General Plan Boundary.	$179,000	$179,000	$0	$0	$0	$0	$0	$0	$0	$0	$179,000
MTSI019	Highway 12 Project Study Report	$90,000	$90,000	$0	$90,000	$0	$0	$0	$0	$0	$0	$0
MTSI020	Design, construction, and engineering associated with widening of Turner Road over State Route 99.	$1,500,000	$1,500,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,500,000
MTSI021	Restriping of Lodi Avenue (4 - Lanes) from Cherokee East 3,000 feet	$13,000	$13,000	$0	$0	$0	$0	$0	$0	$0	$0	$13,000
MTSI022	Reconstruction of Lodi Avenue (4 - Lanes) from Guild Avenue West 700 feet.	$33,000	$33,000	$0	$0	$0	$0	$0	$0	$0	$33,000	$0
MTSI023	Restriping of Turner Road (4 - Lanes) from Beckman Road East 2,500 feet	$11,000	$11,000	$0	$0	$0	$0	$0	$0	$0	$0	$11,000
MTSI024	Widening of Turner Road (4 - Lanes) from Guild Avenue West 700 feet.	$22,000	$22,000	$0	$0	$0	$0	$0	$0	$0	$0	$22,000
MTSI025	Widening of Century Blvd (4 - Lanes) from Lower Sacramento Road east 4,100 feet	$240,000	$240,000	$0	$0	$0	$0	$0	$0	$240,000	$0	$0
MTSI026	Widening of Century Blvd. (4 - Lanes) from Stockton Street to Chickadee Lane.	$31,000	$31,000	$0	$0	$0	$31,000	$0	$0	$0	$0	$0

TABLE 6–1

04/11/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MTSI027	Widening of Stockton Street (4 – Lanes) from Kettleman Lane to Harney Lane.	$81,000	$81,000	$0	$40,500	$0	$40,500	$0	$0	$0	$0	$0
MTSI028	Widening of Guild Avenue (4 – Lanes) from Lodi Avenue to Kettleman Lane.	$168,000	$168,000	$10,080	$10,080	$10,080	$10,080	$10,080	$10,080	$10,080	$48,720	$48,720
MTSI029	Widening of Turner Road (4 – Lanes) from Lower Sacramento Road West to the General Plan Boundary.	$84,000	$84,000	$0	$0	$0	$0	$0	$42,000	$42,000	$0	$0
MTSI030	Widening of Lodi Avenue (4 – Lanes) from Lower Sacramento Road West to the General Plan Boundary	$84,000	$84,000	$0	$0	$0	$0	$0	$0	$0	$0	$84,000
MTSI031	Widening of Kettleman Lane (4 – Lanes) from Lower Sacramento Road West to the General Plan Boundary.	$178,000	$178,000	$0	$0	$0	$0	$0	$0	$0	$0	$178,000
MTSI032	Widening of Lockeford Street (4 – Lanes) from Sacramento Street to Cherokee Lane.	$1,267,000	$1,267,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,267,000
MTSI033	Widening of Victor Rd (Hwy 12) to 4 lanes.	$342,000	$342,000	$0	$0	$0	$0	$0	$0	$0	$0	$342,000
MTSO001	Master Plan 1987	$76,187	$76,187	$76,187	$0	$0	$0	$0	$0	$0	$0	$0
MTSO002	Master Plan and C.I.P. Update – 1997	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$20,000	$0	$0
MTSO003	5 Year Master Plan and C.I.P. Update – 2002	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$0	$20,000	$0

TABLE 6-1

04/11/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS001	Installation of traffic signal located at the int. of Lower Sacramento Road and Turner Road.	$95,000	$95,000	$0	$0	$0	$95,000	$0	$0	$0	$0	$0
MTS002	Installation of traffic signal located at the int. of Turner Road and the State Route 99 Southbound Ramp.	$95,000	$95,000	$0	$0	$0	$0	$0	$0	$0	$0	$95,000
MTS003	Installation of traffic signal located at the int. of Victor Road and Cluff Avenue. (50%)	$95,000	$47,500	$0	$47,500	$0	$0	$0	$0	$0	$0	$0
MTS004	Installation of traffic signal located at the int. of Lodi Avenue and Lower Sacramento Road. (50%)	$95,000	$47,500	$47,500	$0	$0	$0	$0	$0	$0	$0	$0
MTS005	Installation of traffic signal located at the int. of Lodi Avenue and Mills Avenue. (50%)	$95,000	$47,500	$0	$0	$0	$0	$0	$0	$0	$47,500	$0
MTS006	Installation of traffic signal located at the int. of Lower Sacramento Road and Vine Street. (50%)	$90,000	$45,000	$0	$0	$0	$0	$0	$0	$0	$45,000	$0
MTS007	Installation of traffic signal located at the int. of Kettleman Lane and Mills Avenue. (50%)	$95,000	$47,500	$47,500	$0	$0	$0	$0	$0	$0	$0	$0
MTS008	Installation of traffic signal located at the int. of Kettleman Lane and the State Route 99 Southbound Ramp.	$95,000	$95,000	$0	$0	$0	$0	$0	$95,000	$0	$0	$0

TABLE 6-1

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

STREETS AND ROADS

04/11/91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS009	Installation of traffic signal located at the int. of Kettleman Lane and Beckman Road.	$95,000	$95,000	$0	$0	$0	$0	$0	$0	$95,000	$0	$0
MTS010	Installation of traffic signal located at the int. of Lower Sacramento Road and Harney Lane.	$95,000	$95,000	$0	$0	$0	$0	$0	$95,000	$0	$0	$0
MTS011	Installation of traffic signal located at the int. of Harney Lane and Mills Avenue.	$90,000	$90,000	$0	$0	$0	$0	$0	$0	$0	$90,000	$0
MTS012	Installation of traffic signal located at the int. of Harney Lane and Ham Lane.	$90,000	$90,000	$0	$0	$0	$0	$0	$0	$0	$0	$90,000
MTS013	Installation of traffic signal located at the int. of Harney Lane and Stockton Street. (50%)	$90,000	$45,000	$0	$0	$45,000	$0	$0	$0	$0	$0	$0
MTS014	Installation of traffic signal located at the int. of Elm Street and Lower Sacramento Road. (50%)	$90,000	$45,000	$45,000	$0	$0	$0	$0	$0	$0	$0	$0
MTS015	Installation of traffic signal located at the int. of Lockeford Street and Stockton Street. (50%)	$90,000	$45,000	$0	$0	$0	$0	$45,000	$0	$0	$0	$0
MTS016	Installation of traffic signal located at the int. of Turner Road and Stockton Street. (50%)	$90,000	$45,000	$0	$45,000	$0	$0	$0	$0	$0	$0	$0

TABLE 6-1

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

STREETS AND ROADS

04/11/91

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MTS017	Installation of traffic signal located at the int. of Pine St. and Stockton Street. (50%)	$90,000	$45,000	$0	$0	$0	$45,000	$0	$0	$0	$0	$0
MTS018	Installation of traffic signal located at the int. of Turner Road and Mills Avenue. (50%)	$90,000	$45,000	$0	$0	$0	$0	$0	$45,000	$0	$0	$0
MTS019	Installation of traffic signal located at the int. of Turner Road and Edgewood. (50%)	$90,000	$45,000	$0	$0	$0	$0	$0	$0	$45,000	$0	$0
MTS020	Installation of traffic signal located at the int. of Kettleman Lane and Central Avenue. (50%)	$90,000	$45,000	$0	$0	$0	$0	$0	$0	$45,000	$0	$0
MTS021	Installation of traffic signal located at the int. of Elm Street and Mills Avenue (50%)	$90,000	$45,000	$0	$0	$0	$0	$0	$0	$45,000	$0	$0
MTS022	Installation of traffic signal located at the int. of Cherokee Lane and Vine Street. (50%)	$105,000	$52,500	$0	$0	$0	$0	$0	$0	$0	$52,500	$0
MTS023	Installation of traffic signal located at the int. of Ham Lane and Century Blvd. (50%)	$95,000	$47,500	$0	$0	$0	$0	$0	$0	$0	$47,500	$0
MTS024	Installation of traffic signal located at the int. of Cherokee Lane and Elm Street. (50%)	$105,000	$52,500	$0	$0	$0	$0	$0	$0	$0	$52,500	$0
MBC001	Widening of WID Box Culvert along Lower Sacramento Road approx. 1,360 feet South of Lodi Avenue.	$296,000	$296,000	$0	$0	$0	$0	$0	$0	$296,000	$0	$0

TABLE 6-1

04/11/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MBC002	Widening of WID Box Culvert along Turner Road approx. 2,400 feet West of Lower Sacramento Road. (50% S.J. Co.)	$150,000	$75,000	$0	$0	$0	$0	$0	$0	$0	$75,000	$0
MBC003	Widening of WID Box Culvert along Mills Avenue approx 100 feet South of Royal Crest Drive.	$141,000	$141,000	$0	$0	$0	$0	$0	$0	$0	$141,000	$0
MBC004	Widening of WID Box Culvert along Harney Lane approx. 3,300 feet West of Hutchins Street.	$216,000	$216,000	$0	$0	$0	$0	$0	$0	$0	$216,000	$0
MRRX001	Widening of S.P. railroad crossing on Lower Sacramento Road 1,400 ft. North of Turner Road. (50% S.J. Co.)	$202,000	$101,000	$0	$0	$0	$0	$0	$0	$0	$101,000	$0
MRRX004	Widening and upgrade of protection devices of the railroad crossing at the int. of Lockeford Street and Guild Avenue.	$202,000	$202,000	$0	$0	$0	$0	$0	$0	$0	$0	$202,000
MRRX005	Widening of Central California Traction Co. crossing on Victor Rd. (Hwy 12) 1,350 ft. East of Guild Avenue.	$222,000	$222,000	$0	$0	$0	$0	$0	$0	$0	$0	$222,000
MRRX006	Widening and upgrade of protection devices of the railroad crossing at the intersection of Beckman Road and Lodi Avenue.	$227,000	$227,000	$0	$0	$0	$0	$0	$0	$0	$227,000	$0
MRRX007	Construction of railroad crossing at int. of Lodi Avenue and Guild Ave.	$215,000	$215,000	$0	$0	$0	$0	$0	$0	$0	$215,000	$0

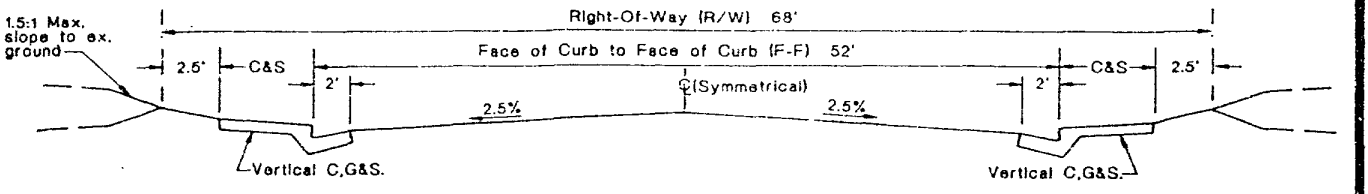
TABLE 6–1

04/11/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

STREETS AND ROADS

Project Number	Major Planned Facilities	Program Costs	Impact Fee Fund	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MRRX008	Construction of railroad crossing at int. of Cluff Avenue and Thurman Street	$189,000	$189,000	$0	$0	$0	$0	$0	$0	$0	$189,000	$0
MRRX009	Widening and upgrade of protection devices of Central Calif. Traction Co. X–ing on Kettleman Ln. 1,350 ft. East of Guild Ave. (50% S.J. Co.)	$215,000	$215,000	$0	$0	$0	$0	$0	$0	$0	$0	$215,000
MRRX010	Widening of SP railroad crossing on Harney Ln. 1,380 ft. East of Hutchins Street	$202,000	$202,000	$0	$0	$0	$0	$0	$0	$0	$202,000	$0
	Upgrades to Existing Facilities	$26,560,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	New Development Share of Existing Facilities											
	a. Hutchins St. Widening–Tokay to Lodi (93%)	$41,626										
	b. Hutchins St. Widening–Rimby to Vine (58%)	$151,458										
	c. Lockeford St. Widening–Pleasant to SPRR (80%)	$59,838										
	d. Cherokee/Century Intersection Widening (100%)	$46,573										
	e. Century/WID Box Culvert (86%)	$109,551										
	f. Stockton St. Widening–Kettleman to Vine (100%)	$463,597										
	g. Stockton St. Widening–Vine to Tokay (100%)	$82,235										
	h. Turner/Cluff Intersection Widening (100%)	$138,835										
	Total:	$1,094,000	$1,094,000	$0	$68,375	$68,375	$68,375	$68,375	$68,375	$68,375	$341,875	$341,875
STREETS AND ROADWAY COST		$46,194,450	$15,290,687	$226,267	$301,455	$123,455	$289,955	$382,955	$407,485	$1,020,865	$3,635,155	$8,903,095



MAJOR COLLECTOR

TWO LANE

MAXIMUM CONSTRUCTION BY DEVELOPER

FIGURE 6-1 TYPICAL STREET SECTION

Signal lights, bridge crossings, and freeway interchanges are not privately constructed facilities and are completely funded by the City through development impact fees and other funding sources such as Federal, State, County and Measure K.

Street and Road Improvements

A listing of the street and road improvement projects included in the development impact fee program is provided in Table 6-1. Location of these projects is shown on Figure 6-2. For the most part, the improvement projects consist of new construction and modification of routes.

For the purpose of identifying the portion of each major route that will be funded by the City, the typical sections described above have been assumed. The developer obligation, as described in the previous section, is limited to right-of-way and improvements to construct a major collector (68 feet).

In the circulation study prepared for the City, the need for new traffic signals was identified. Costs of these signals have been included in the development impact fee program. At locations where minimum CalTrans signal warrants have already been met, 50 percent of the improvement cost has been allocated to the Impact Fee Fund.

Freeway Improvements

As recommended by TJKM, interchange improvements for Kettleman Lane/State Route 99 and Turner Road/State Route 99 will be necessary to maintain a LOS C or better. Proposed interchange improvements at Kettleman Lane/State Route 99 call for the realignment of Beckman Road. Currently, Beckman Road is located about 225 feet east of the northbound ramp onto State Route 99, a distance that is considered too close for two signalized intersections. Realignment of Beckman is proposed in the environmental impact report for Kettleman Properties located at the northeast corner of Kettleman Lane and Beckman Road. The proposed design constitutes a realignment of both Beckman Road and the northbound offramp, but is still subject to review by Caltrans and approval by the California Transportation Commission. As part of the Kettleman interchange work, a route study will be prepared that will address traffic and circulation at the interchange.

Measure K identified the SR 99/12 interchange as a funded project in the amount of $700,000. For the purposes of this study, it is assumed that 30 percent of the interchange costs will be derived from sources outside this fee program. A portion of the 30 percent will be Measure K funds and the other could be State funds or possibly additional growth in Lodi not covered by this study.

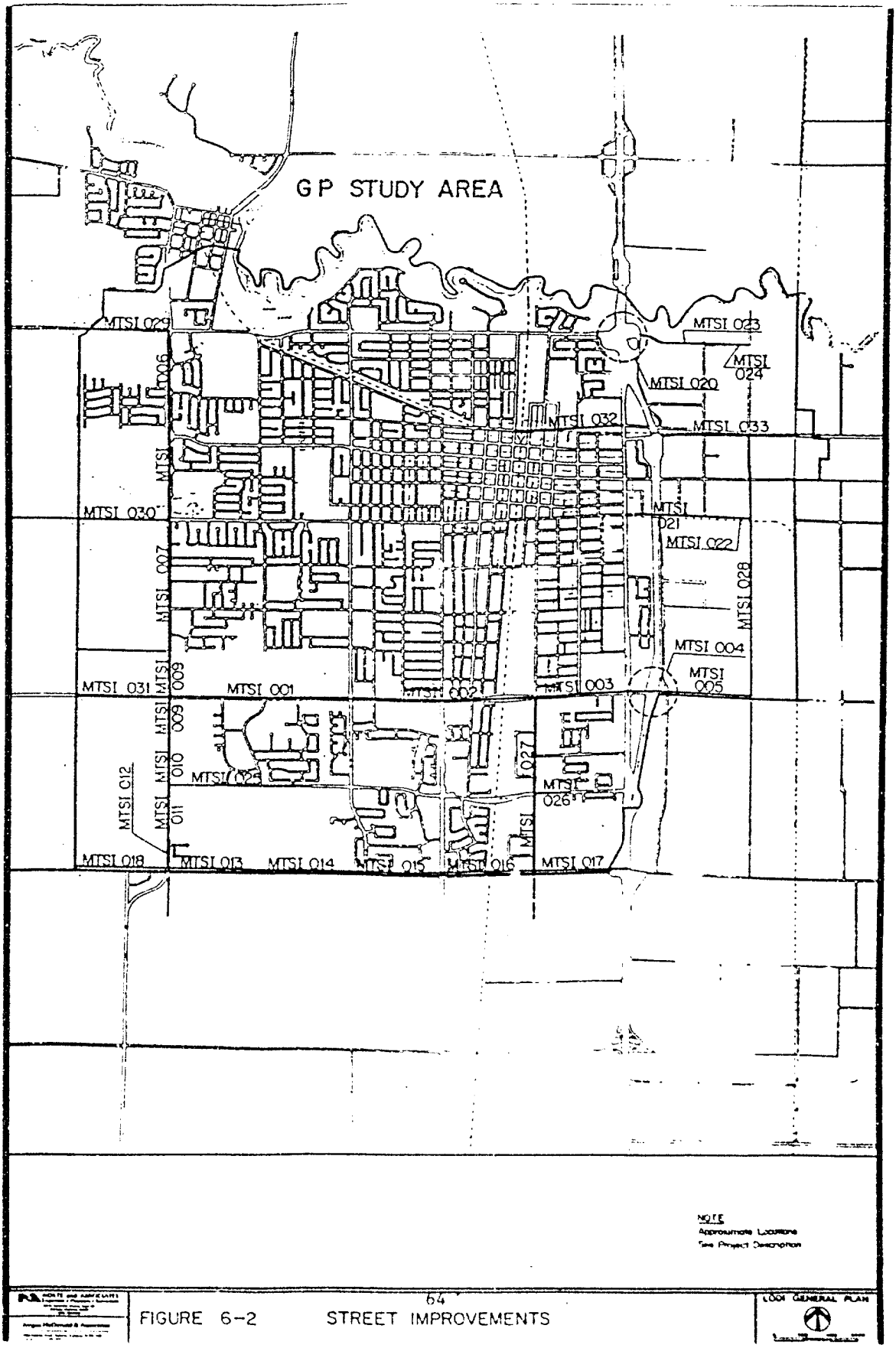


FIGURE 6-2 STREET IMPROVEMENTS

ESTIMATED COSTS AND PHASING

In Table 6-1, a summary of the street projects and development impact fee funding is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Roadway improvement costs reflect only the City's funding responsibility per the proposed City Reimbursement Policy and do not reflect the total estimated construction cost.

In preparing the estimates of construction cost, the developer obligation, City obligation and development impact fee funding for the projects, the following factors were considered. The City obligation for funding of projects includes everything not required of the developer including special medians, landscaping, and right-of-way.

Phasing of the improvements is based upon the Forecast of Units Constructed Over the General Plan Period (Appendix A) provided by the City. In Table 6-1, the phasing is divided by year for the first seven years followed by two five-year increments. Costs for the projects serving the General Plan development funded on or before July 1, 1990 are shown in the current year (1990/91). Actual costs of these projects have been adjusted to the January 1, 1990 dollar reference.

Lower Sacramento Road is also included in the list of projects funded, in part, by Measure K. Based upon discussion with the City, the funding of Lower Sacramento Road improvements are divided amongst the City, developer and Measure K. Obligations of the developer have been discussed. For the purposes of this study, it is assumed that Measure K funds will only pay for the addition of 2 lanes (one each direction) above and beyond the City's planned 4 lane road. Therefore, obligation of the City is limited to 2 lanes and the landscape center median.

Relationship of Streets and Roads Projects to New Development

A reasonable relationship must be established between the fees use and the type of development on which the fee is imposed. In order to establish this relationship, we must first demonstrate that the type of development upon which the fee is to be charged will, in fact, use, be served by, or benefit from the public facilities to be financed.

Each and every land use will benefit from the streets and road facilities within the community. Residents use the streets to get to and from work, shopping, and entertainment. Commerce and industry use the streets for deliveries, customers, and employees. Each and every land use in the Proposed General Plan will benefit from the facilities constructed as part of the capital improvements program and, therefore, is appropriately part of the fee program.

Relationship of Streets and Roads Projects to Land Uses

Once the relationship between the facilities to be constructed and the land uses has been established, the burden of financing is to be distributed to each land use in proportion to its use of, or benefit from, the improvements. This is accomplished through the use of a Residential Acre Equivalent (RAE) schedule. A RAE schedule indicates the relative responsibility to pay for improvements for each land use categ y in relation to the single family detached residential category.

Trip generation factors developed and used in the Circulation Study form the basis for calculating an RAE schedule for streets and road facilities. Based upon recommendation of the City Transportation Consultant, trip generation factors for commercial categories were reduced by 30 percent to compensate for pass-by trips. As a result, net trip generation factors were calculated for each land use and compared to the base RAE factor of 1.0 for single family detached residential. The RAE schedule shows a reasonable relationship between the cost of streets and roads projects and the financing burden placed on each land use as based upon their relative generation and demand for streets and road facilities. RAE schedule for streets and roads is shown in Table 6-2.

Recommended Fees

The Streets and Road Facilities Fee is shown in Table 6-2. The total fee is $5,380 per low density residential acre.

Regional Facilities

The fee program presented in this report does not include funding for improvements to roads outside the City of Lodi General Plan boundaries. The ½ cent sales tax override for transportation (Measure K) recently approved by San Joaquin County voters, includes a provision for Regional Traffic Mitigation fees to be adopted by January 1, 1993. This fee program will need to be modified in coordination with San Joaquin County and the Council of Governments (the local transportation authority) to include a regional element.

TABLE 6-2

11-Apr-91

SUMMARY OF DEVELOPMENT IMPACT FEES
STREETS AND ROADS

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$5,380
Medium Density	Acre	1.96	$10,550
High Density	Acre	3.05	$16,420
East Side Residential	Acre	1.00	$5,380
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$5,380
Medium Density	Acre	1.96	$10,550
High Density	Acre	3.05	$16,420
COMMERCIAL			
Neighborhood Commercial	Acre	1.90	$10,230
General Commercial	Acre	3.82	$20,570
Downtown Commercial	Acre	1.90	$10,230
Office Commercial	Acre	3.27	$17,610
INDUSTRIAL			
Light Industrial	Acre	2.00	$10,770
Heavy Industrial	Acre	1.27	$6,840
Industrial Reserve	Acre	2.00	$10,770

Note: Dollar amounts are in January 1, 1991 dollars.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 7

POLICE

OVERVIEW

Level of Service

Target for emergency response time is 3 minutes anywhere in the City. Currently, emergency response times are under this goal. There were a total of 65 sworn personnel and 33 non-sworn personnel authorized in 1988/89. These figures reveal a service standard of 0.95 sworn personnel and 0.47 non-sworn personnel per 1,000 persons served. Currently, the department is understaffed relative to the standard described above by 11 sworn and 5 non-sworn personnel.

The service level that is typically espoused for Police is so-many officers per 1,000 residents. This service standard does not account for employees, shoppers, tourists and other persons present in the service area during the day who may use or require assistance from the Police Department. Developing a standard in terms of "Persons Served" considers all persons who may use these services so that the service standard also captures the burden these other participants will place on the facilities. This is done through estimating the demand or use of the facilities by persons associated with each land use type.

Instead of determining the use from each unit of land developed, as is the procedure with RAEs, the use of each land use is converted into a use per person. In the case of residential land uses this takes the form of use per resident, and in the case of non-residential uses is a use per employee. These use per "person served" figures are then normalized around the Single Family land use to produce "Persons Served" factors which are applied to a forecast of the total number of residents and employees from each land use to compute the total persons served from new development.

Existing Police Facilities

The Lodi Police Department provides police protection services to all areas within the city limits. The Police Department serves a 9.4 square mile area with an estimated population of 50,300 in 1990. The Police Department, located at 230 W. Elm Street, has an estimated 21,571 square feet of building space. The current employee standard based 98 total employees is 1.3 employees per 1,000 persons served. The current space standard is 220 square feet of building space per employee.

Existing Deficiencies

Existing deficiencies are calculated based on what is currently provided in the way of staff and facilities and what staff and facilities are planned to be provided at the end of the planning period. Further, the existing deficiency calculation is prepared to identify the portion of the facilities, if any, which should be serving existing development based upon a current staffing or facility deficiency relative to the future standard for police staffing and space.

Table 7-1 presents the calculation of the existing deficiency for the Police Station Expansion. Based upon forecasts provided by the City for building space and police staffing in the future, the space standard and the staffing standard increase slightly. This produces only a very minor existing deficiency such that 7.3% of the Police Station Expansion is not funded from the development impact fees.

PLANNED POLICE FACILITIES

Police facilities to serve at buildout of the Proposed General Plan were identified by City staff and the Police Department. A summary of the facilities is presented in Table 7-2. With the exception of the Police Station expansion and the jail expansion, the major facilities are self explanatory.

Currently, alternatives for police and jail facilities are being considered by the City and the Police Department. Specific locations for the facilities have not been identified. Alternatives being considered include renovation and expansion of the existing Police Station.

ESTIMATED COST AND PHASING

In Table 7-2, a summary of the Police facility and estimated costs to serve the future City of Lodi is presented. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1, 1990 of 4673. Phasing of the improvements is based upon forecasts of facility needs by the City over the planning period.

For the purposes of fee study, the police station expansion costs are not wholly attributable to the development provided for under the Proposed General Plan. A portion of the building expansion (7.3%) will serve existing development. The cost in Table 7-2 reflects the reduced estimated cost. The jail expansion and the other facility costs listed in Table 7-2 are not subject to the existing deficiency reduction.

TABLE 7-1
EXISTING DEFICIENCIES ANALYSIS
POLICE

05-Apr-91

Description of Item	Existing Service Population	Future Additions	Future Total
GENERAL GOV. PERSONS SERVED	80,207	33,571	113,778
SERVICE CAPACITY			
Police Employees	98.0	43.0	141.0
Police Facilites (Sq. Ft.)	21,571	10,000	31,571
SERVICE STANDARD			
Current Service Standard:			
Police Employees Per 1,000 Persons Served	1.22		
Building Sq. Ft. Per Employee	220.1		
Target Service Standard			
Police Employees Per 1,000 Persons Served			1.24
Building Sq. Ft. Per Employee			223.9
ADDITIONAL SERVICE CAPACITY REQUIRED			
Additional Employees	1.6	41.6	43.2
Additional Building Area (Sq. Ft.)			
For Existing Employees	372		372
For New Employees	359	9,321	9,680
Total	731	9,321	10,052
Burden on New and Existing Development	7.3%	92.7%	100.00%
Cost of New Facilities	$146,000	$1,854,000	$2,000,000

Note: Dollar amounts are in constant January 1, 1991 dollars.

Sources: Nolte & Associates and Angus McDonald & Associates

TABLE 7 - 2
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
POLICE

04/05/91

Project Number		Program Cost	Impact Fee	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
LPD001	Police Station expansion to add 10,000 square feet of space.	$2,000,000	$1,854,000	$0	$0	$0	$0	$0	$0	$92,900	$1,761,100	$0
LPD002	Jail expansion to add 10 new cells	$275,000	$275,000	$0	$0	$0	$0	$0	$0	$27,500	$247,500	$0
LPD003	Miscellaneous safety equipment for 29 officers.	$44,000	$44,000	$0	$3,000	$3,000	$3,000	$3,000	$3,000	$3,000	$13,000	$13,000
LPD004	Animal control truck and equipment	$23,000	$23,000	$0	$0	$0	$0	$0	$0	$0	$0	$23,000
LPD005	2 pickup trucks equipped with radios and other equipment.	$36,000	$36,000	$0	$0	$0	$0	$0	$0	$0	$36,000	$0
LPD006	Eight patrol cars and equipment.	$144,000	$144,000	$0	$18,000	$0	$18,000	$0	$18,000	$0	$36,000	$54,000
LPD007	Ten portable radios.	$26,000	$26,000	$0	$0	$3,000	$0	$3,000	$0	$3,000	$9,000	$8,000
LPD008	Five work stations.	$20,000	$20,000	$0	$0	$4,000	$0	$0	$4,000	$0	$4,000	$8,000
LPD009	Five computer terminals.	$8,000	$8,000	$0	$0	$1,500	$0	$1,500	$0	$0	$2,500	$2,500
TOTAL POLICE DEPARTMENT		$2,576,000	$2,430,000	$0	$21,000	$11,500	$21,000	$7,500	$25,000	$126,400	$2,109,100	$108,500

DEVELOPMENT IMPACT FEE

Relationship of Police Projects to New Development

The relationship between existing deficiencies, improved service standards and capacity for new development was summarized in Table 7-1. Only the portion of the police facilities whose demand was generated by new development was included in the Development Impact Fee program.

Relationship of Police Projects to Land Uses

The RAE schedule for police facilities that is shown in Table 7-2 was developed from data supplied by the Lodi Police Department. The schedule is based on the relative number of calls for service from each land use category.

Recommended Fees

The Police Facilities fee is shown in Table 7-3. The total fee is $1,130 per low density residential acre.

TABLE 7-3

11-Apr-91

SUMMARY OF DEVELOPMENT IMPACT FEES
POLICE

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$1,130
Medium Density	Acre	1.77	$2,010
High Density	Acre	4.72	$5,350
East Side Residential	Acre	1.09	$1,230
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$1,130
Medium Density	Acre	1.77	$2,010
High Density	Acre	4.72	$5,350
COMMERCIAL			
Neighborhood Commercial	Acre	4.28	$4,860
General Commercial	Acre	2.59	$2,940
Downtown Commercial	Acre	4.28	$4,860
Office Commercial	Acre	3.72	$4,220
INDUSTRIAL			
Light Industrial	Acre	0.30	$340
Heavy Industrial	Acre	0.19	$210
Industrial Reserve	Acre	0.30	$340

Note: Dollar amounts are in constant January 1, 1991 dollars.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 8

FIRE

OVERVIEW

Level of Service

The level of service that guides the requirement for and placement of a new fire station is to provide a maximum of a three minute driving time to all areas within the City limits and the Limit of Utilities Planning.

Existing Fire Facilities

The City of Lodi Fire Department currently serves the City from three fire stations. Station #1 is located at 210 W. Elm Street, Station #2 is located at 705 E. Lodi Avenue and Station #3 is located at 2141 South Ham Lane. When these stations were constructed, they provided the desire service levels to the City and additional service capacity to the east, south and southwest areas. With new development occurring West of the existing City, additional fire protection capacity is required.

Existing Deficiencies

Currently, no major deficiencies exist in the Fire Facilities relative to the level and service standard for the City. Response times to some areas in the northwest are below the City standard. In a strict sense, correcting the existing deficiency in the northwest area should not be a cost allocated to the fee program. However, in the west side area, excess fire service capacity exists that will be used to serve future growth. Future growth should be required to purchase from the City excess capacity in the existing facilities. Considering that the existing deficiency is relatively minor compared to the excess capacity, and since the City has traditionally treated fire service on a city-wide basis, it is recommended that the fee be based solely on new capital expenditures. This serves to simplify the fee program and eliminates the need for zone fees and minor deficiency adjustments.

PLANNED FIRE FACILITIES

Fire Facilities to serve buildout of the Proposed General Plan were identified in the Fire Station Location Master Plan and by City and staff during preparation of this report. Major facilities projects are listed in Table 8-1. The new Fire Station (#4) will be located on Lower Sacramento Road near Park West Drive. Other facilities listed in Table 8-1 will equip Station #4 and expand capabilities at the other stations.

During the preparation of the fee study, a number of fire facility capital improvement projects were identified by the City. The nature of these

TABLE 8 – 1

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

FIRE

GENERAL CITY PROJECT PHASING

Project Number	Description	Estimated Construction Cost	Impact Fee	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
LFD001	New westside station construction (#4), furnishings and equipment.	$475,000	$475,000	$0	$0	$0	$0	$0	$45,000	$430,000	$0	$0
LFD002	New 100' ladder truck and equipment.	$475,000	$475,000	$0	$0	$0	$0	$0	$0	$475,000	$0	$0
LFD003	Two sedans.	$20,000	$20,000	$0	$0	$0	$0	$0	$0	$0	$10,000	$10,000
LFD004	Two mini-vans.	$30,000	$30,000	$0	$0	$0	$0	$0	$0	$15,000	$0	$15,000
LFD005	Five computers.	$16,000	$16,000	$0	$0	$0	$0	$0	$0	$3,000	$6,000	$7,000
LFD006	Fire fighting Safety gear for 23 employees	$13,000	$13,000	$0	$0	$0	$0	$0	$0	$13,000	$0	$0
LFD007	12 self-contained breathing apparatus.	$18,000	$18,000	$0	$0	$0	$0	$0	$0	$18,000	$0	$0
LFD008	Station #1, Construction/remodel.	$18,000	$18,000	$0	$0	$0	$0	$0	$0	$0	$18,000	$0
	Equipment Replacement	$1,090,000	0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL FIRE		$2,155,000	$1,065,000	$0	$0	$0	$0	$0	$45,000	$954,000	$34,000	$32,000

projects can be characterized as upgrading of existing facilities and purchase of equipment. As a result, only those costs directly related to extending the existing level of service to new development are included in the fee program. These costs (such as radios, fire engines and equipment replacement) are estimated to be $1,065,000.

ESTIMATED COST AND PHASING

A summary of the Fire Facility projects and estimated costs and phasing is presented in Table 8-1. Estimated costs are based upon the Engineering News Record 20 Cities Construction Cost Index for January 1990 of 4673.

DEVELOPMENT IMPACT FEE

Relationship of Fire Projects to New Development

As noted previously, existing deficiencies were not included in the Development Impact Fee program. Only those projects, or portions of projects, that serve new development were financed from Development Impact Fees.

Relationship of Fire Projects to Land Uses

The RAE schedule for fire facilities that is shown in Table 8-2 was developed from data supplied by the Lodi Fire Department. The RAE schedule considers relative number of fire calls and Emergency Medial Service (EMS) calls generated by each land use category. Calls involving automobile accidents and fires were spread back to the land use categories based on the streets and roads RAE factors.

Recommended Fees

The summary Fire Facilities fee is shown in Table 8-2. The total fee is $510 per low density residential acre.

TABLE 8-2

11-Apr-91

SUMMARY OF DEVELOPMENT IMPACT FEES
FIRE

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$510
Medium Density	Acre	1.96	$1,000
High Density	Acre	4.32	$2,210
East Side Residential	Acre	1.10	$560
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$510
Medium Density	Acre	1.96	$1,000
High Density	Acre	4.32	$2,210
COMMERCIAL			
Neighborhood Commercial	Acre	2.77	$1,420
General Commercial	Acre	1.93	$990
Downtown Commercial	Acre	2.77	$1,420
Office Commercial	Acre	2.46	$1,260
INDUSTRIAL			
Light Industrial	Acre	0.64	$330
Heavy Industrial	Acre	0.61	$310
Industrial Reserve	Acre	0.64	$330

Note: Dollar amounts are in January 1, 1991 dollars.
Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 9

PARKS AND RECREATION

OVERVIEW

This chapter of the report presents the cost estimates and the proposed phasing for each Park and Recreation improvements that are to be financed from development impact fee revenues. Government Code §66000 specifies certain findings are necessary for a valid development impact fee. This chapter presents the required findings and presents the calculation of the Parks and Recreation fee.

Level of Service

The current level service for standard parks (not including school parks or drainage basins) is 3.4 acres per 1,000 Park and Recreation Persons Served and the current level of service for community center building space is approximately 770 square feet per 1,000 Park and Recreation Persons Served. These standards were used as the basis for calculating the percentage of new parks and additional community center building space that could be appropriately financed from new development.

Existing Park and Recreation Facilities

Table 9-1 provides a summary of the existing park acreage in the City of Lodi. In the table, the most important number is the 177.8 acres of Standard Park area. It is this acreage that is used to compute the existing standard for park acreage. Based upon an estimated current usage of 52,680 park and recreation persons served, the existing standard for parks and recreation acreage is 3.4 acres per 1,000 persons served. Based upon an estimated current building space inventory of 94,800 square feet in community center buildings, the existing space standard is 1,800 square feet per 1,000 persons served. A summary of existing park facilities provided by the City and is presented in Table 9-2.

The level of Parks and Recreation services is often expressed in terms of acres per 1,000 population. This service standard must be interpreted carefully. Employees, shoppers, tourists and other persons present during the day may use the park and recreation facilities in addition to residents of Lodi. The concept "Persons Served" considers <u>all</u> persons who may use these facilities so that the service standard also captures the burden these other participants will place on the facilities. A weighting factor is estimated that accounts for various categories of persons served in accordance with the relative frequency with which they are expected to use park and recreation facilities.

TABLE 9-1

INVENTORY OF EXISTING PARK AND RECREATION ACREAGE

#	Description	Existing Park Facilities				Future Parks
		Total Acres	Standard Park	Basin	School	Total Acres
1.	Armory	3.2	3.2			
2.	Beckman	16.6	0.8	15.8		
3.	Blakely	9.0	9.0			
4.	Kandy Kane	0.2	0.2			
5.	Century (1)	2.5	2.5			
6.	Emerson	2.0	2.0			
7.	English Oaks Commons	3.7	3.7			
8.	G-Basin	0.0				
9.	Henry Glaves	12.6	3.0	9.6		
10.	Grape Bowl	15.0	15.0			
11.	Hale	2.6	2.6			
12.	Hutchins Street Square	10.0	10.0			
13.	Kofu	10.0		10.0		
14.	Lawrence/Zupo Hardball	18.0	10.0		8.0	
15.	Legion	5.6	5.6			
16.	Lodi Lake	101.0	101.0			
17.	Maple Square	1.0	1.0			
18.	Pixley Park (C-1 Basin)	17.0		17.0		
19.	Salas Park	21.0	1.0	20.0		
20.	Softball Complex	7.6	7.6			
21.	Van Buskirk	1.0	1.0			
22.	Vinewood	14.0	0.8	11.2	2.0	
23.	Westgate	6.0	0.3	5.7		
24.	Washington School	5.1			5.1	
25.	Lakewood School	5.0			5.0	
26.	Reese School	6.0			6.0	
27.	Nichols School	5.8			5.8	
28.	Heritage School	2.0			2.0	
29.	Woodbridge School	5.0			5.0	
30.	Sr. Elementary	12.0			12.0	
31.	Lodi High School	25.0			25.0	
32.	Tokay High School	21.0			21.0	
33.	Needham School	2.0			2.0	
Westgate Expansion						0.6
G-Basin						1.0
F-Basin						1.0
I-Basin						1.0
C-Basin Expansion						1.0
Park Area #1						3.0
Park Area #3						3.0
Park Area #6						10.0
Park Area #4						10.0
Park Area #5						8.0
Park Area #7						10.0
Eastside Park						2.0
East Side Softball Complex						19.4
Lodi Lake - Expansion						13.0
	Total Acreage	368.5	180.3	89.3	98.9	83.0
	Total Acreage for Standard (1)		177.8			

Source: City of Lodi.

(1) Century Park is a temporary park and is not included in standards.

Existing Deficiencies

Calculation of existing deficiencies is based upon the current standard relative to the future standard for parks and recreation acreage and community building space. In Table 9-3, results of the existing deficiency analysis are presented.

The findings indicate the following. First, the added park acreage in the Proposed Fee Program matches the acreage standard from 3.4/1,000 persons served . As a result the added park acreage can be allocated to new development. Second, the added community building space will match the existing space standard of 1,800/1,000 person served.

Existing deficiencies are not funded through the development impact fee program. In this fee study, alternative funding sources are not specifically identified that would cover parks and recreation existing facilities deficiencies.

TABLE 9-2

INVENTORY OF EXISTING PARK AND RECREATION FACILITIES

PARK FACILITY	EXISTING STANDARD
Park Acreage	3.4/1,000 persons served
Community Building Area persons	1,800 sq ft/1,000 served
Restrooms	1/park over 3.0 acres
Lighted Baseball Diamonds	11 Total
Tot lot	1/park
Lighted Tennis Courts	11 Total
Swimming Pools	4 Total

Source: Nolte and Associates and Angus McDonald & Associates

PLANNED PARK AND RECREATION FACILITIES

A summary of the Parks and Recreation Facility Projects is presented in Table 9-4. Estimated costs are referenced to the Engineering News Record 20 Cities Construction Cost Index for January 1990 of 4673. Project descriptions played an important role in preparing the project estimates and were developed in concert with City staff. Project numbers listed in Table 9-4 are used to identify project locations in Figure 9-1. The Parks and Recreation Master Plan is scheduled early in the program to refine details and costs of the new parks.

TABLE 9-3
EXISTING DEFICIENCIES ANALYSIS
PARKS AND RECREATION

04/11/91

Description of Item	Existing Conditions	Future Additions	Future Total
PARK PERSONS SERVED	52,680	24,509	77,188
SERVICE CAPACITY			
Park Acreage	177.8	83.0	260.8
Community Center Buildings (Sq. Ft.)	94,800	44,100	138,900
SERVICE STANDARD			
Current Service Standard:			
Park Acres Per 1,000 Persons Served	3.4		
Community Center Sq. Ft. Per 1,000 Persons Serve	1,800		
Target Service Standard			
Park Acres Per 1,000 Persons Served			3.4
Community Center Sq. Ft. Per 1,000 Persons Served			1,799
ADDITIONAL SERVICE CAPACITY REQUIRED			
Additional Park Acres	0.2	82.8	83.0
Additional Community Center SqFt	(4)	44,104	44,104
BURDEN ON NEW AND EXISTING DEVELOPMENT			
Additional Park Acres	0.0%	100.0%	100.0%
Additional Community Center SqFt	0.0%	100.0%	100.0%

Note: Dollar amounts are in January 1, 1991 dollars.

Sources: Nolte & Associates and Angus McDonald & Associates.

TABLE 9–4

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

Project Number	Description	Program Cost	Impact Fee	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997–2002	2002–2007
MPR001	Parks and Recreation Master Plan.	$50,000	$50,000	$0	$50,000	$0	$0	$0	$0	$0	$0	$0
MPR002	Administration building expansion at corporation yard.	$2,864,000	$1,289,000	$0	$0	$0	$0	$0	$1,289,000	$0	$0	$0
MPR003	Underground tank replacement.	$37,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR004	Lodi Lake Central Park improvements.	$866,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR005	Lodi Lake peninsula improvements.	$375,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR006	Lodi Lake expansion to 13 acre westside area.	$1,816,000	$1,816,000	$0	$0	$0	$0	$0	$0	$0	$1,816,000	$0
MPR007	Lodi Lake silt removal.	$250,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR008	Lodi Lake Turner Road Retaining Wall.	$156,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR009	Lodi Lake Utility Extension (Water).	$133,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR010	Softball complex Concession.	$79,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR011	Softball Complex replacement of concession stand.	$107,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR012	Softball Complex shade structure.	$12,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR013	Softball Complex paving.	$11,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR014	Softball Complex upgrade sports lighting.	$61,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

TABLE 9-4

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

PARKS AND RECREATION

Project Number	Description	Program Cost	Impact Fee	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPR015	Stadium Electrical & Sports Lighting.	$122,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR016	Stadium Press Box	$44,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR017	Stadium Parking Lot Landscape & Lighting	$81,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR018	Stadium Returf & Drainage Improvements	$130,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR019	Stadium Additional Seating	$82,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR020	Kofu Park Enlarge Bleacher Area	$25,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR021	Kofu Park New Playground Equipment	$25,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR022	Kofu Park Permanent Backstop	$8,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR023	Kofu Park Group Picnic Facilities	$7,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR024	Kofu Park Entrance Improvements	$13,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR025	Armory Park Parking Lot	$126,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR026	Armory ParkPress Box & Bleacher Wall	$27,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR027	Armory Park Upgrade Electrical	$20,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR028	Zupo Field Replacement of wood seats.	$26,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR029	Zupo FieldUpgrade Electrical & Sports Lighting	$61,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

TABLE 9-4
DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

04/05/91

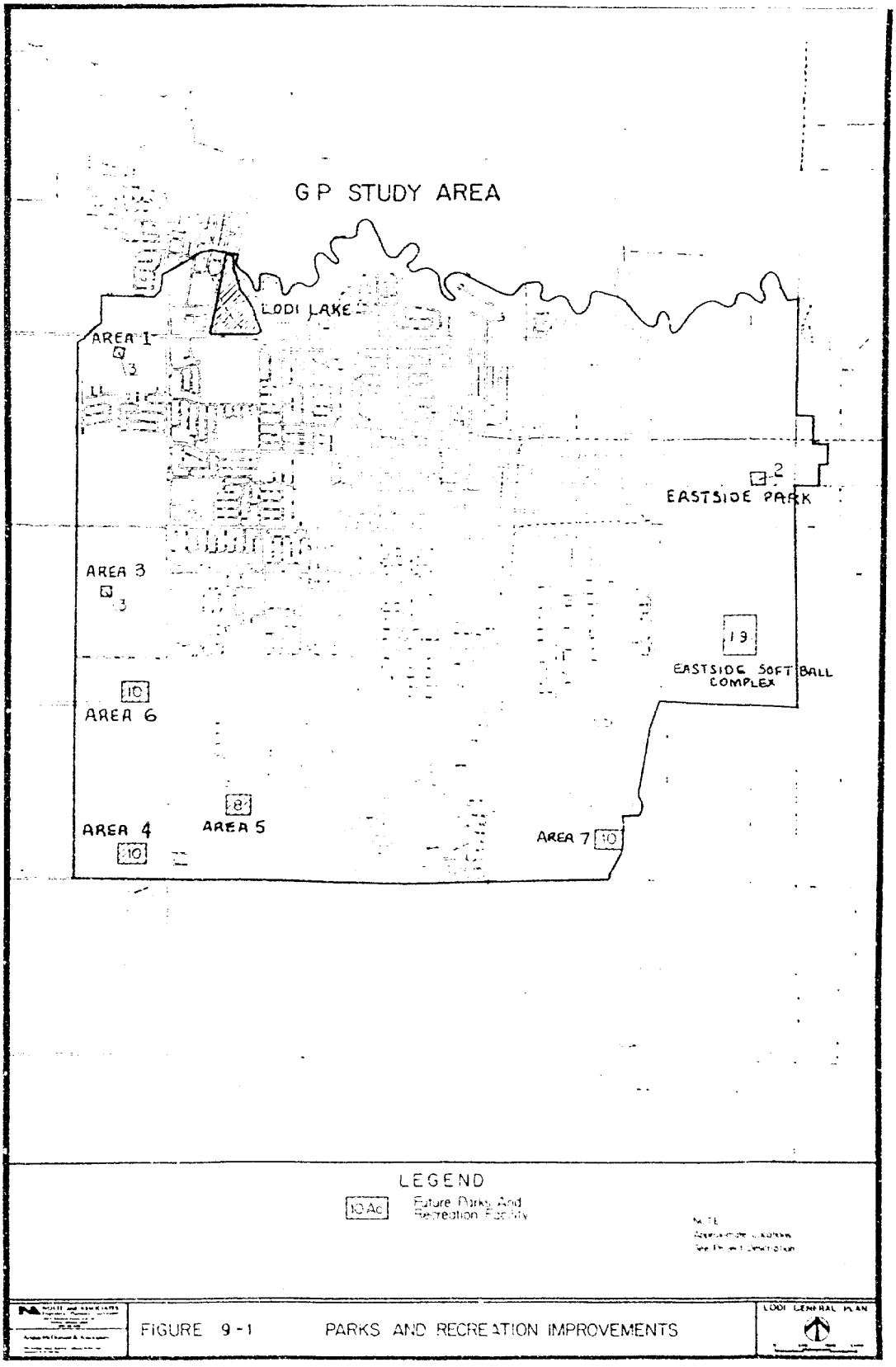
Project Number	Description	Program Cost	Impact Fee	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPR031	Hale Park General Improvements	$206,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR033	Community Buildings (City-Wide)	$4,410,000	$4,410,000	$0	$275,625	$275,625	$275,625	$275,625	$275,625	$275,625	$1,378,125	$1,378,125
MPR034	Blakely Park Upgrade Lighting	$22,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR035	Salas Park Protective Shade Structures	$51,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR036	Salas Park/Fence Diamond Areas	$9,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR037	Emerson Park Restroom Replacement	$178,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR038	Pixely Park (C - Basin) General Improvements	$465,000	$465,000	$0	$0	$0	$0	$0	$0	$0	$0	$465,000
MPR039	Westgate Park Improvements	$353,000	$353,000	$0	$0	$0	$0	$0	$0	$353,000	$0	$0
MPR040	Area #1 Park (3ac.)	$459,000	$459,000	$0	$0	$0	$0	$0	$0	$0	$459,000	$0
MPR041	Area #3 Park & Pool (3ac.)	$712,000	$712,000	$0	$0	$0	$0	$0	$0	$0	$0	$712,000
MPR042	Area #4 Park	$1,462,000	$1,462,000	$0	$0	$0	$0	$0	$0	$0	$0	$1,462,000
MPR043	Area #6 Park Improvements	$1,377,000	$1,377,000	$0	$0	$0	$0	$0	$0	$0	$688,500	$688,500
MPR044	Area #5 Park Improvements	$1,148,000	$1,148,000	$0	$0	$0	$0	$0	$0	$0	$1,148,000	$0
MPR045	Area #7 Park Improvements	$1,860,000	$1,860,000	$0	$0	$0	$0	$1,860,000	$0	$0	$0	$0
MPR046	Eastside Park General Park Improvements	$307,000	$307,000	$0	$0	$0	$0	$0	$153,500	$153,500	$0	$0
MPR048	East Side Softball Complex	$2,692,000	$2,692,000	$0	$0	$0	$0	$0	$0	$0	$0	$2,692,000
MPR047	F-Basin Improvements Park	$120,000	$120,000	$0	$0	$0	$0	$0	$0	$0	$0	$120,000

TABLE 9-4

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING
PARKS AND RECREATION

Project Number	Description	Program Cost	Impact Fee	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
MPR048	I-Basin Improvements Park	$120,000	$120,000	$0	$0	$0	$0	$0	$0	$0	$0	$120,000
MPR052	G-Basin Park Improvements	$300,000	$300,000	$0	$0	$0	$0	$0	$0	$0	$150,000	$150,000
MPR053	Hutchins Square Catering Kitchen	$35,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR054	Hutchins Square Multi-purpose	$750,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR055	Hutchins Square Child Care Center	$568,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR056	Hutchins Square Connectors/ Wallways	$1,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
MPR057	Hutchins Square Auditorium Remodel	$4,000,000	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
TOTAL PARKS AND REC.		$30,114,000	$18,740,000	$0	$325,625	$275,625	$275,625	$1,935,625	$1,718,125	$782,125	$5,639,625	$7,787,625


G P STUDY AREA
LODI LAKE
AREA 1
3
2
EASTSIDE PARK
AREA 3
3
19
EASTSIDE SOFT BALL COMPLEX
10
AREA 6
8
AREA 4
AREA 5
10
AREA 7 10
LEGEND
10 Ac
Future Parks And Recreation Facility
NOTE
FIGURE 9-1
PARKS AND RECREATION IMPROVEMENTS
LODI GENERAL PLAN

ESTIMATED COSTS AND PHASING

Improvement and land acquisition costs for parks and recreation facilities are based upon information provided by City staff and the City Capital Improvement Plan. Land costs were assumed to be $100,000 per acre. In cases where land for parks expansion is already owned by the City, the proposed fee program does not pay or reimburse the City for land costs.

A number of the projects identified by the City are not attributable to new development and more accurately fall into the category of maintenance and repair. These projects are easily identified because no cost has been allocated to the impact fee fund.

In Table 9-4, the phasing of construction costs is presented only for those Parks projects to be funded through the fee program. Phasing of the projects is based upon forecasts provided by the City. The Parks and Recreation Master Plan is scheduled early in the program to refine details and cost of the program.

Analysis of the existing and planned facilities for the corporation yard identified that only a portion of the facilities will serve future growth. Based upon building footage, 45 percent of the planned corporation yard improvements costs are allocated to future growth.

DEVELOPMENT IMPACT FEE

Relationship of Park and Recreation Projects to New Development

The additional park acres to be added throughout the program serve only new development. The existing deficiency analysis presented in Table 9-3 also shows that the added community center space is serving only new development.

Relationship of Park and Recreation Projects to Land Uses

The RAE schedule for parks and recreation that is shown in Table 9-5 recognized explicitly that, while demand is primarily generated by the residential population, parks and recreation facilities also serve employees. Examples of non-residential demand include lunch time use, company picnics and company team participation in sports leagues.

The RAE schedule was based on the relative amount of time available to residents and to employees to make use of park and recreational facilities.

Recommended Fees

The summary Parks and Recreation fee is shown in Table 9-5. The total fee is $11,810 per low density residential acre.

TABLE 9-5

11-Apr-91

SUMMARY OF DEVELOPMENT IMPACT FEES
PARKS AND RECREATION

Land Use Categories	Unit	RAE	Fees
RESIDENTIAL			
Low Density	Acre	1.00	$11,810
Medium Density	Acre	1.43	$16,880
High Density	Acre	2.80	$33,040
East Side Residential	Acre	1.10	$12,970
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$11,810
Medium Density	Acre	1.43	$16,880
High Density	Acre	2.80	$33,040
COMMERCIAL			
Neighborhood Commercial	Acre	0.32	$3,750
General Commercial	Acre	0.32	$3,750
Downtown Commercial	Acre	0.32	$3,750
Office Commercial	Acre	0.54	$6,430
INDUSTRIAL			
Light Industrial	Acre	0.23	$2,680
Heavy Industrial	Acre	0.33	$3,890
Industrial Reserve	Acre	0.23	$2,680

Note: Dollar amounts are in January 1, 1991 dollars.

Sources: Nolte & Associates and Angus McDonald & Associates.

CHAPTER 10

GENERAL CITY FACILITIES

OVERVIEW

Level of Service

The current staffing level of service provided by the City of Lodi for general city services (e.g. City manager, finance department) is 1.25 Full Time Equivalents (FTEs) per 1,000 persons served. The current space standard is 229 square feet per FTE. These standards were used as the basis for calculating the percentage of additions to City Hall that would be appropriately charged to either new or existing development.

While there is not a stated level of service for general city facilities there is an implied standard based on the current level of city employees and building space per city employee. The service standard used to examine the existing deficiencies for General City Facilities includes demands for general city services generated by business as well as demand by residents.

A "Persons Served" standard is calculated by estimating the demand or use of general city services by persons associated with each land use type. Instead of determining the use by each unit of land developed, as is the procedure with RAE factors, the use for each land use is converted into a use per person. In the case of residential land uses this takes the form of use per resident, and in the case of non-residential uses is a use per employee. These use per "per person served" figures are then normalized around the Single Family land use to produce "Persons Served" factors which are applied to a forecast of the total number of residents and employees from each land use to compute the total persons served from new developments.

Existing Deficiencies

Table 10-1 presents the results of the existing deficiency analysis. In the case of the City Hall addition, both the staffing standard and the space standard are increased over the planning period. As a result, a portion (27.8%) of the addition can not be funded from development impact fees.

PLANNED GENERAL CITY FACILITIES

In Table 10-2, a listing of General City Facilities Projects is provided. Included in the listing are those capital improvements and expenditures identified by City Department heads in their budget forecasts for 2006/7.

ESTIMATED COST AND PHASING

A summary of the phasing of projects funded by the fee program is provided in Table 10-2. Phasing of the projects is based upon the forecast of units constructed over the General Plan period.

TABLE 10-1
EXISTING DEFICIENCIES ANALYSIS
CITY HALL FACILITIES

04/05/91

Personnel	Units	Current 1989/90	Change 1989/90-2007/08	End State 2007/08
Administration	Persons	13	8	21
Finance(w/o Purchasing)	Persons	28	14	42
Purchasing (FT)	Persons	5	3	8
Purchasing (PT)	Persons	1	-1	0
Data Processing	Persons	5	13	18
Building (CDD)	Persons	6	5	11
Planning (CDD)	Persons	5	4	9
Public Works	Persons	19	9	28
Totals:		82	55	137

Personnel	Units (1)	FTE Conversion Factor	Current 1989/90	Change 1989/90 2007/08	End State 2007/08
Administration	FTE	100%	13.0	8.0	21.0
Finance(w/o Purchasing)	FTE	100%	28.0	14.0	42.0
Purchasing (FT)	FTE	100%	5.0	3.0	8.0
Purchasing (PT)	FTE	50%	0.5	-0.5	0.0
Data Processing	FTE	100%	5.0	13.0	18.0
Building (CDD)	FTE	100%	6.0	5.0	11.0
Planning (CDD)	FTE	100%	5.0	4.0	9.0
Public Works	FTE	100%	19.0	9.0	28.0
Total Units			81.5	55.5	137.0
Building Area Square Feet			18657.0	14448.0	33105.0
Total Persons Served			63676.0	29320.0	92996.0
Staffing Standard:					
FTE's per 1,000 Person's Served			1.28	0.19	1.47
Space Standard:					
Area Per Employee (FTE)			228.92	12.72	241.64

Source: Nolte & Associates and Angus McDonald & Associates

TABLE 10–1

04/05/91

(Cont.)

SUMMARY OF DEVELOPMENT IMPACT FEES
CITY HALL FACILITIES

Description of Item	Existing Population	Future Additions	Future Total
GENERAL GOVERNMENT PERSONS SERVED	63,676	29,320	92,996
SERVICE CAPACITY			
General Government Employees (Full Time Equivalent (FTEs))	81.5	55.5	137.0
General Government Buildings (Sq. Ft.)	18,657	14,448	33,105
SERVICE STANDARD			
Current Service Standard:			
General Government Employees Per 1,000 Persons Served	1.3		
Building Sq. Ft. Per Employee	228.9		
Target Service Standard			
General Government Employees Per 1,000 Persons Served			1.5
Building Sq. Ft. Per Employee			241.6
ADDITIONAL SERVICE CAPACITY REQUIRED			
Additional Employees (Full Time Equivalent (FTE))	12.3	43.2	55.5
Additional Building Area (Sq. Ft.)			
For Existing Employees	1,037		1,037
For New Employees	2,974	10,437	13,411
Total	4,011	10,437	14,448
Burden on New and Existing Development	27.8%	72.2%	100.0%
Cost of New Facilities	$1,171,770	$3,043,230	$4,215,000

Source: Nolte & Associates and Angus McDonald & Associates

TABLE 10 - 2

04/05/91

DEVELOPMENT RELATED CAPITAL COSTS AND PHASING

GENERAL CITY FACILITIES

Project Number	Location	Program Costs	Impact Fee	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997-2002	2002-2007
GCFI001	City Hall Remodel and Addition	$4,215,000	$3,043,230	$0	$700,000	$700,000	$0	$0	$0	$0	$1,643,230	$0
GCFI002	Civic Center Parking Lot Expansion 13 N. Church	$141,000	$141,000	$0	$0	$0	$0	$0	$0	$141,000	$0	$0
GCFI008	Property acquisition. 217 E. Lockeford.	$213,000	$213,000	$0	$0	$0	$0	$0	$0	$0	$0	$213,000
GCFI009	Parking Lot Improvements, NE corner of Lockeford and Stockton.	$70,000	$70,000	$0	$0	$0	$0	$0	$0	$0	$0	$70,000
GCFI010	Library Expansion	$2,900,000	$2,900,000	$0	$0	$0	$0	$0	$0	$0	$2,900,000	$0
GCFI011	Public Works - Trucks	$750,000	$750,000	$44,100	$44,100	$44,100	$44,100	$44,100	$44,100	$44,100	$220,600	$220,700
GCFI012	Public Works - Pickups and Sedans	$715,000	$715,000	$42,100	$42,100	$42,100	$42,100	$42,100	$42,100	$42,100	$210,300	$210,000
GCFI013	Public Works - Air Compressors	$90,000	$90,000	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300	$5,300	$26,500	$26,400
GCFI014	Public Works - Misc. Office Equipment	$65,500	$65,500	$3,900	$3,900	$3,900	$3,900	$3,900	$3,900	$3,900	$19,300	$18,900
GCFI015	Finance - Misc. Office Equipment	$181,700	$181,700	$10,700	$10,700	$10,700	$10,700	$10,700	$10,700	$10,700	$53,400	$53,400
GCFI016	Finance Computer (AS 400 Upgrade)	$72,000	$72,000	$4,200	$4,200	$4,200	$4,200	$4,200	$4,200	$4,200	$21,200	$21,400
GCFI017	Fee Program Monitoring	$3,010,000	$2,560,000	$0	$160,000	$160,000	$160,000	$160,000	$160,000	$160,000	$800,000	$800,000
CODV001	General Plan Update 1987	$267,019	$267,019	$267,019	$0	$0	$0	$0	$0	$0	$0	$0
CODV002	General Plan Update 1997	$250,000	$250,000	$0	$0	$0	$0	$0	$0	$250,000	$0	$0
CODV003	General Plan Update 2002	$250,000	$250,000	$0	$0	$0	$0	$0	$0	$0	$250,000	$0
TOTAL CITY FACILITIES		$13,190,219	$11,568,449	$377,319	$970,300	$970,300	$270,300	$270,300	$270,300	$661,300	$6,144,530	$1,633,800

DEVELOPMENT IMPACT FEE

Relationship of General City Projects to New Development

The relationship between existing deficiencies, changing service standards and demand created by new development was presented in Table 10-1. This exhibit was used to allocate responsibility for financing between Development Impact Fees and other sources of financing.

Relationship of General City Projects to Land Uses

The RAE schedule that has been developed for general City facilities is shown in Table 10-3. This schedule is based on an estimate of relative population and employment (measured in persons per household and in employees per thousand square feet, respectively) and on the judgment that employees place a relative burden on general City administrative facilities that is 50 percent of that imposed by residents.

Recommended Fees

The summary General City Facilities fee is shown in Table 10-3. The total fee is $6,370 per low density residential acre.

TABLE 10-3

11-Apr-91

SUMMARY OF DEVELOPMENT IMPACT FEES
GENERAL CITY FACILITIES

Land Use Categories	Unit	RAE	Fee
RESIDENTIAL			
Low Density	Acre	1.00	$6,370
Medium Density	Acre	1.43	$9,100
High Density	Acre	2.80	$17,810
East Side Residential	Acre	1.10	$6,990
PLANNED RESIDENTIAL			
Low Density	Acre	1.00	$6,370
Medium Density	Acre	1.43	$9,100
High Density	Acre	2.80	$17,810
COMMERCIAL			
Neighborhood Commercial	Acre	0.89	$5,700
General Commercial	Acre	0.89	$5,700
Downtown Commercial	Acre	0.89	$5,700
Office Commercial	Acre	1.53	$9,760
INDUSTRIAL			
Light Industrial	Acre	0.64	$4,070
Heavy Industrial	Acre	0.93	$5,890
Industrial Reserve	Acre	0.64	$4,070

Note: Dollar amounts are in January 1, 1991 dollars.
Sources: Nolte & Associates and Angus McDonald & Associates.

APPENDIX A

FORECAST OF MAPPED ACREAGE FOR PROPOSED GENERAL PLAN

TABLE A-1

GENERAL PLAN ACREAGE GROWTH FORECAST
CITY OF LODI PUBLIC FACILITIES FINANCING PLAN

Land Use Categories	Units	Existing As Of 1987/88	Existing As Of 1989/90	1990/91	1991/92	1992/93	1993/94	1994/95	1995/96	1996/97	1997/98-2001/02	2002/03-2006/07	Total Forecast	Total 2006/07
RESIDENTIAL														
Low Density	Acres	2,065	2,231	5	5	3	0	0	0	0	0	0	13	2,244
Medium Density	Acres	159	193	1	0	0	0	0	0	0	0	0	1	194
High Density	Acres	182	167	4	0	0	0	0	0	0	0	0	4	171
East Side Residential	Acres	0	4	3	0	0	0	0	0	0	0	0	3	7
PLANNED RESIDENTIAL														
PR - Low Density	Acres	0	0	96	72	51	52	52	52	52	289	325	1042	1042
PR - Medium Density	Acres	0	0	0	5	3	3	3	3	3	19	21	67	67
PR - High Density	Acres	0	0	8	6	4	4	4	4	4	23	26	83	83
Total Residential		2,406	2,595	123	87	61	69	70	60	60	342	395	1,257	3,852
COMMERCIAL														
Neighborhood	Acres	149	155	13	13	3	3	3	3	3	21	21	83	238
General	Acres	189	196	0	0	0	0	0	0	1	0	0	1	197
Downtown	Acres	19	22	0	0	0	0	0	0	0	0	0	0	22
Office	Acres	65	86	0	0	1	1	1	1	1	2	2	9	95
Total Commercial		422	459	13	13	4	4	4	4	5	23	23	93	552
INDUSTRIAL														
Light Industrial	Acres	221	263	4	5	3	3	4	4	4	26	32	85	348
Heavy Industrial	Acres	333	492	3	4	2	3	3	3	3	20	25	66	558
Industrial Reserve	Acres	0	0	21	26	13	17	21	21	21	128	158	426	426
Total Industrial		554	755	29	35	17	23	29	29	29	174	214	579	1,333

Source: City of Lodi Public Works Department.

RP9020 B

MEMORANDUM, City of Lodi, Public Works Department

TO: City Council
City Manager

FROM: Public Works Director

DATE: June 20, 1991

SUBJECT: Development Impact Fees - Public Hearing Questions and Responses

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Following are responses to questions raised at the May 28 Development Impact Fee public hearing. The questions are paraphrased from the tape of the meeting. Some additional discussion is provided at the end of the memo.

1. What is the "Value" of existing Parks and Recreation Department in $/Acre for the existing City compared to the new fees? (Terry Piazza)-

   Since the "existing standard" as defined is the same as that used for calculating the fee, the "value" would be the same if replacement value of existing facilities was used. The estimate for future park facilities took into account the existing inventory shown in Table 9-2 on Page 80 of the study. Thus, the new park facilities are comparable to existing facilities. Explicitly answering the question would require a more detailed inventory and additional estimates; both requiring significant staff time and consultant expense.

2. Sewer RAE schedule appears inconsistent with Design Standards and Water RAE (Steve Pechin) -

   The Design Standards, while based on the various Master Plans, were written to cover the design of facilities within a development project. The impact fee study relied on city-wide flow data taken directly from the engineering consultants who worked on the General Plan. The unit flow factors are not necessarily the same and are more conservative in the Design Standards; thus, comparing the RAE schedule to the Design Standards will not provide consistent results.

   However, in reviewing this issue, the consultant found discrepancies in both the Water and Sewer RAE schedules. The schedules have been recalculated as follows:

Category	Water RAE	Sewer RAE
Residential		
Low Density	1.00	1.00
Medium Density	1.96*	1.96*
High Density	3.49*	3.49*
East Side	1.00	1.00
PR-LD	1.00	1.00
PR-MD	1.96*	1.96*
PR-HD	3.49*	3.49*
Commercial		
Neighborhood	0.64	0.94 (was 1.25)
General	0.64	0.94 (was 1.25)
Downtown	0.64	0.94 (was 1.25)
Office	0.64	0.94 (was 1.25)
Industrial		
Light	0.26 (was 0.92)	0.42 (was 0.33)
Heavy	0.26 (was 0.92	0.42 (was 0.33)

*Original figure was rounded to nearest 0.1; used nearest 0.01 to be consistent with other categories

3. Storm Drain RAE schedule appears inconsistent with Design Standards and Water and Sewer RAE's (Steve Pechin) -

   The storm drain relative factors are the same as those presently in effect. They were determined by the City in 1988 as part of the update of the Master Storm Drain System Master Plan and Fee Program. An analysis was done on the total cost of providing trunk lines, basins and pumping facilities for residential versus commercial development. The Design Standards only address runoff calculations. While it could be argued that a more refined breakdown is possible (for example, commercial versus industrial), the cost difference would be less the difference implied by the Design Standards which is only 13%.

   Incidentally, the storm drain fees need to be recalculated due to land use changes in the adopted General Plan and the omission of two existing storm drain reimbursement agreements that are to be paid out of the impact fee fund.

4. How does additional water system revenue from metering affect the fee program? (Steve Pechin) -

   Presumably, water rates will be set to cover maintenance, replacements and contributions to general fund and no new capital facilities. Of course, actual water rates are set by the City Council. To the extent water conservation from metering reduces the need for additional wells, future updates of the General Plan and Water Master Plan would reduce the number of new wells needed. Then the fee could go down.

5. What is the effect of removing Lodi Lake from the calculation on existing park standard? (Steve Pechin) -

   The lake itself accounts for 35 acres of the 101 acres of Lodi Lake Park included in the existing standard. Eliminating acreage from the existing standard and reducing the new park acreage to match the existing standard will reduce the fee. The exact reduction amount will depend on the results of the cash flow analysis. Based on the average cost of new parks, Table 1 presents the approximate effect of reducing the acreages as shown.

6. Question using $100,000 per acre as value for land acquisition (Steve Pechin, Dennis Bennett, Jeff Kirst, Council) -

   Based on comments from other developers, staff feels the $100,000 figure is reasonable considering the City will have to have appraisals done and pay prevailing market rates at the time of purchase. This action will occur nearer to development time, thus land will be more expensive than land purchased years ago on speculation.

7. In computing the area of existing community buildings, were leased facilities included and how does it affect the program; is there a list of the existing facilities? (Steve Pechin, Jeff Kirst) -

   The facilities used in determining the existing standard are:

Hutchins Street Square Cafeteria	6,400 SF	
Camp Hutchins Room	6,000 SF	
Hutchins Street Square North Complex	19,600 SF	
Hutchins Street Square Pool Area	5,400 SF	
Hutchins Street Square Fine Arts Building	8,700 SF	
Recreation Annex, North Stockton Street	3,500 SF	leased
Kofu Park Building	1,800 SF	
Lee Jones Building (@ Legion Park)	900 SF	
Grape Festival Pavilion	32,000 SF	leased*
Grape Festival Chablis Hall	9,600 SF	leased
Recreation Office Meeting Room	900 SF	
	94,800 SF	Total

   (use of indoor school facilities not included)
   *Pavilion only available 5½ months/year

   This square footage was used in determining the amount and cost of new community buildings (44,100 SF @ $100/SF = $4,410,000). Reducing this square footage has a similar effect on the fee as reducing park acreage, although the amounts are smaller. See Table 1 for some approximate alternatives.

8. Were revenues from renting/leasing community buildings included in the program? (Steve Pechin) -

   No, City policy in setting rental rates is to attempt to recover operating expenses only.

9. Police RAE's the land use is not as important a factor as the area of town (Steve Pechin) -

   Possibly, but this is not accounted for in the methodology and it would probably not be legal to do so.

10. Residential impact fee comparison - Tracy is going down, Galt's figure is only for certain parts of town and include Mello-Roos figures, also the comparisons are distorted, misleading and inaccurate (Dennis Bennett) -

    Tracy's storm drain fee has been reduced from $5,204 to $4,564, however, many of the other categories have gone up. The total of $23,116 shown in the comparison is now $23,661. We have also been informed that a suit is being filed over Tracy's fees.

    Based on correspondence from Bennett and Compton, the City's comparison is accurate except in two categories:

    Water - Depending on the area being developed, the fee is $950 instead of $1,800.

    NE Area - These fees were established to reduce the Mello-Roos bond payments. They are used for capital facilities including the types of facilities in Lodi's proposed program, and in our mind fit the definition of an impact fee.

    Their letter provided the following fee examples:

    1,331 SF home in NE area: $12,623.64
    1,250 SF home not in NE area: $ 8,763.20

    The City comparison showed $12,677 for a 2,000 SF home. Given the wide variation in fee programs and situations, we feel the comparison is sufficiently accurate for the purpose intended.

    The fee comparisons were not intended to be precise. Doing so would require a specific project design in a specific area for each city. The proposed City of Lodi fees are based on providing the facilities listed for the General Plan service area. The City Council may, as a matter of policy, reduce the fees in order to be "competitive". However, this will transfer to burden to the General Fund and/or Utility Funds. As discussed at the public hearing, arbitrarily adjusting the fees opens the City to legal challenge. Reducing the fees can be done by:

    1) Lowering the service standard and eliminating projects - This would uniformly reduce the fee in each land use category for the reduced standard fee category (i.e., Police, Fire, etc.).

    2) Reduce the fee per RAE in any or all of the fee categories - This would require subsidies from other City funds in order to maintain the service standard or would mean deferring or eliminating projects, in effect reducing the level of service.

3) Directly subsidize land use categories (such as low income housing) by paying all or a portion of the fee out of the General Fund or other City funds.

11. Fee collection at Final Map versus Building Permit stage (Dennis Bennett) -

Later collection will increase fees and create much more administrative burden, i.e., billing and tracking every parcel versus one map. Changing to collecting all fees at building permit would mean recalculating to a square footage basis for commercial/industrial and presumably per dwelling unit for residential. We could split with some categories at map and others at building permit. We already collect storm drain fees at map stage.

12. Parks standard distorted especially considering Lodi Lake and School acreage, need more analysis (Dennis Bennett) -

The standard is a policy decision; the data is there for Council to decide. The first Parks project is a new Parks Master Plan which will more precisely define the nature of the new parks, improvements to be included, etc. Staff suggests that is the time to do more analysis and fine-tune the fee program.

School acreage was not included in the existing standard nor included in future additions since the City has no control over either situation.

13. Need more analysis on General City Facilities Fees (Dennis Bennett) -

Again, this is a policy decision on the Council's part as to what projects should be paid out of fees versus the general fund or simply deleted. All the City Facilities included are needed to accommodate growth.

14. Effect on house price of borrowing money to pay fees at Final Map stage (Dennis Bennett) -

The impact fees for a single-family subdivision at 5 lots per acre total $7,634 per lot. At 15% interest for 18 months, the additional cost to be passed on the home buyer is approximately $1,700 plus whatever the developer and builder mark up their costs. These numbers are comparable to a realtor's fee on a $150,000 sale ($9,000 @ 6%).

This is over-estimated however, since it includes the time spent building the house. In collecting at building permit stage, there is still 6 months' or so interest while the house is being built. In collecting at the later stage, the fee will have to be approximately 4% higher to account for the loss of interest revenue in the fee program. These two factors would reduce the additional amount to approximately $800 plus markup. We also would assume that with the growth management program, we will not see excessive numbers of lots

mapped so there should be a shorter time between map filing and home construction.

15. Lodi's proposed Park standard is 3.4 acres per 1,000 persons served. What is the parks standard for other agencies (Council) -

    Stockton - 3 acres per 1,000 residents (considering commercial/industrial impact)

    Davis - standard is area/distance based

    Tracy - 3.5 acres per 1,000 residents

    Manteca - 5 acres per 1,000 residents

    Woodland (draft) - 3.2 acres per 1,000 persons served plus additional standards for facilities and regional parks

16. Relationship/methodology between Commercial land use and Police, Fire and General City Facilities and sales tax revenue (William Mitchell) -

    No credit was offered for potential sales tax revenue. These sources don't even pay for Police, Fire, and Parks and Recreation operations, let alone new capital facilities.

17. Difference/relationship between commercial fees (especially streets) based on per acre basis versus per 1,000 SF of building area (William Mitchell) -

    The basic decisions to use General Plan land use categories to keep the fee program simple and to collect at map stage means that acreage must be used since specific project plans are not available then. This also evens out small differences in land use and is much simpler to administer (fewer arguments over trip rates for specific types of land use nor worrying about minor changes in land use). Given this, there will always be at least 50% of the projects who feel they are below the average and should get a fee reduction. That could be done, but only if we charge the other 50% a higher fee.

18. Why have parallel water mains on certain streets? (Council) -

    This is done on major streets and provides better service to what are usually large parcels needing many fire services. It reduces the need to cross the major street repeatedly which is expensive since such crossings are usually bored rather than open cut.

19. Police "existing persons served" is 80,207 per Table 7-1. This seems high. (Council) -

    The number includes an accounting of residents and employees based on the various General Plan documents. It is consistently used in the existing land use and project land use, although it is recalculated separately for each fee category.

20. The additional number of firefighters appears to be more than that needed for the new station. Is it "top heavy"? (Council) -

    The projects/equipment shown on Table 8-1 are per the Fire Long Range Plan which includes:

    - A 4-person "quint" (combined truck/engine) at the new Station 4, which includes 1 captain (mid-management)
    - Adding a firefighter to the east side truck company
    - Adding 2 fire inspectors
    - Adding 1 public education specialist
    - Adding 1 hazardous materials specialist

    All are firefighting personnel. This is a total of 23 positions for which equipment costs only are included.

21. We are collecting fees for a fire station that will not be built for a few years (Council) -

    The collection of fees for future projects is in compliance with State law given that we have a long-range Capital Improvement Program.

22. Parks and Recreation, Page 78, Paragraph 2 says 770 SF is the existing building standard (Council) -

    That is a typographical error; the correct figure is 1,800 SF.

23. If a service club or private donation builds a park improvement, what happens to the fee? (Council) -

    When a project included in the fee program is funded from another source, the cost estimate would be changed at the next fee program update along with any other changes and/or cost increases; thus the total fee would be adjusted accordingly.

24. Why don't we reimburse the City for the cost of land already purchased? (Council) -

    That could be done. However, then the land could not be counted as part of the existing standard. For example, the semi-developed portion of Pixley Park (C-Basin) was counted in the existing standard. It could be removed from the standard and included in new parks. In some specific cases (such as the rest of C-Basin), the undeveloped land was purchased with impact fee (Master Storm Drain) funds so it would not be appropriate to "buy" it again. In other cases, such as the 13-acre Lodi Lake Park expansion, the land was acquired many years ago (more than 10) and it would be difficult to determine the purchase terms and conditions. In the case of streets where we included recent widening projects, the cost of land (Right-of-Way acquisition) was included. We would include some allowance for park land already owned if Council so desires and City provides specific direction. This would of course increase the fee. An example is shown in Table 1.

25. Why is the level of service standard for City Hall being increased per Page 91, Table 10-1? (Council) -

The analysis for City Hall reflects that fact that the existing building is overcrowded, thus the total cost of the project cannot be placed on new development. The term "level of service standard" in this case is misleading since it is a statement of existing conditions, not a desired level of space allocation. The future total is based on the present plans for the expansion of the building and matches the projections of City Hall personnel increases throughout the life of the General Plan.

Additional Discussion

Although there were no specific questions, the issue of "affordable housing" was discussed. This issue involves much more than just impact fees and includes land prices, construction costs, interest charges, profit margins and "the Market". However, the following discussion just addresses impact fees.

Certainly anything that increases expenses to developers and builders has the potential of increasing the final sale price. The issue of "who ultimately pays" is not clear and depends on many local factors. According to the latest information staff received at a recent seminar on impact fees, there have been very few rigorous studies that attempt to answer this question. These few indicate that while there is an increase, it is "trivial" when compared against increases due to other factors.

This seminar included some discussion on the "impact" of impact fees. Ten suggestions on offsetting their impact are attached as Exhibit A. Given the City's 2% Growth Management Plan, some of these suggestions are not possible. Note that No. 7 suggests fees be charged as early as possible in the approval process. Numbers 9 and 10 and similar alternatives would require a much more active role by the City in the area of housing programs. Such programs could be handled by other public agencies on a contract basis, by a consultant, or by new City staff.

Recommendation/Action

At this point, staff needs Council direction on how to proceed with the Development Impact Fee Program in order to complete the enabling ordinance and implementing resolution. The draft fees as presented need to be recalculated anyway because of the changes in the final adopted General Plan and the Water and Sewer RAE factor changes. Also, the calculations started with revenue and expenses in fiscal year 1990/91. Obviously, the program will not start then. We do wish to proceed as quickly as possible; the City cannot collect any of its county-wide 1/2¢ sales tax (Measure K) allocations until we have a traffic fee in place.

Council decisions are needed on the following issues that have been raised which will also affect the fee calculation:

1. RAE Schedules - In addition to the water and sewer changes, if the Council has questions/concerns on other schedules (such as Parks and Recreation and commercial/industrial land use), these should be resolved.

2. Projects/Standards - A decision should be made on the project list and standards used, especially in Parks and Recreation where the most questions were raised; also the land value figure should be agreed upon.

3. Fee Collection - The issue of collecting at Final Map versus Building Permit is critical. In changing to building permit, staff would recommend changing the residential acre equivalent factors (RAE's) to a dwelling unit and 1,000 SF commercial/industrial basis.

Jack L. Ronsko
Public Works Director

JLR/RCP/mt

cc: Concerned Citizens
Nolte and Associates
McDonald and Associates
Assistant City Engineer
Department Heads

Table 1
APPROXIMATE PARKS AND RECREATION IMPACT FEE REVISIONS

	"Existing" Standard	Future Additions	Cost of Future Additions	Fee per RAE	Diff.
Parks					
With Lodi Lake	177.8 Ac	83.0 Ac	$12,991,000*	$11,810	--
Deduct Lake 35 Acres	142.8 Ac	66.7 Ac	$10,440,000 (approx.)	$10,210	-$1,600
Deduct 50% of Lake 35 Acres	160.3 Ac	74.8 Ac	$11,710,000 (approx.)	$11,000	-$ 810
Community Buildings					
With All Facilities	94,800 SF	44,100 SF	$ 4,410,000	$11,810	--
Deduct All Leased Facilities	49,700 SF	23,120 SF	$ 2,312,000 (approx.)	$10,490	-$1,320
Prorate Pavilion SF	77,470 SF	36,040 SF	$ 3,604,000 (approx.)	$11,310	-$ 500
Land Reimbursement					
Lodi Lake 13 Acre Expansion	--	--	$ 1,300,000 (approx.)	$12,630	+$ 820

*Master Plan, Community Buildings, and miscellaneous projects subtotal $5,749,000 for $18,740,000 total program

Exhibit A

Offsetting the Impacts of Impact Fees

Connerly (1988) argues that impact fees are simply bad policy because of their tendency to force higher prices and thereby displace lower- and middle-income households. Huffman, Nelson, Smith, and Stegman (1988) warn that impact fees may displace development to areas that may be less able cope with that development. They also warn of fiscal effects. The problem is that public officials have not generally come to grips with these or other effects of impact fees. Where impact fees are relatively small, however as they seem to be at the present time in most communities assessing them -- any impact of impact fees will be practically meaningless.

Nevertheless, where communities are concerned about prospective adverse impacts of impact fees, they may pursue any of several mitigating policies (Weitz, 1984). The aim of such policies is to shift as much of the burden back to owners of vacant land as possible, soften the magnitude of impact fee effects on housing prices by encouraging greater land use intensity, and distribute the remaining burden among tenants of new development and developers so that no party is burdened with the whole impact. What exactly are those policies? Ten are suggested here.

1. Assure that long-range community plans adequately foresee future development demand by providing enough land for that development. That land must be provided with suitable infrastructure. These efforts will keep the land market from internalizing supply shortages attributable solely to unserviced land.

2. Give adequate advance notice to developers of impending impact fees. This may be done through public hearings and delayed effective dates. The objective is to give developers enough time to negotiate more favorable land purchase prices.

3. Tailor impact fees to the effects that specific developments will have on communities. Fixed fees fail to account for projects have relatively higher impacts because of their location in more congested areas. Setting fees by service area of facilities is one workable solution.

4. Attempt to provide a competitive market. In a tight market where demand for developable land exceeds supply in the short term, public officials might allow greater development density (where facilities can accommodate it), or allow annexations.

5. Assure consistent land use practices. When landowners perceive that zoning or planning changes are easily acquired, they will force developers to pay prices reflecting those expectations. Communities should hold firm to land use designations.

6. Many communities under-assess vacant land or extend it certain open space tax preferences. Such practices subsidize speculative behavior, allow landowners to hold land for longer periods, and enable landowners to demand higher prices than the market would otherwise justify. They should be reconsidered.

7. Assess impact fees at the stage in the development process that can have the least impact on prices. Consideration might be given to assessing the fees upon approval of a project. This has the effect of forcing developers to internalize the fee as a cost before selling land to builders. It should encourage developers to negotiate lower land prices.

As a practical matter, the farther along in the development process the fee is assessed, the more likely it will passed along to buyers. Assessing the fee at the building permit stage has the advantage of raising revenue approximately when the impact is felt while keeping the fee relatively far away from buyers. Assessing fees upon completion or explicitly shifting fees to buyers will not put downward pressure on sellers of vacant, buildable land and will instead guarantee forward linkage of the fee.

8. Communities should consider more flexible use of local improvement districts. If communities can extend to new development lower borrowing rates and allow repayment of the fee over a long period of time, the potentially adverse effects of impact fees may be greatly reduced.

9. Communities should aggressively pursue subsidized housing programs offered by the federal and state governments. Connerly (1988), for example, calculates that the impact fee burden on lower-income households can be nearly completely eliminated by use of federal low income housing tax credits.

10. Some communities pay the impact fee for lower- and middle-income housing from the general fund or other sources. This has many attractive features. First, there is little adverse impact on the construction of affordable housing. Second, the impact fee revenues are in fact raised and put into necessary, earmarked accounts for use by specific facilities. Third, it is the community at-large that subsidizes such housing with payment of the fees. Loveland, Colorado, and Broward County, Florida, are among communities that do this.

Communities should consider an impact fee mitigation policy package comprised of the combination of those policies that together show the greatest promise for offsetting the impacts of impact fees.

Source: "A Practitioner's Guide to Development Impact Fees" by James C. Nicholas, Arthur C. Nelson, Julian Juergensmeyer

Course notebook from 1991 seminar on Development Impact Fees

CITY OF LODI
PUBLIC WORKS DEPARTMENT

1991 Fee and Service Charge Schedule

Development Impact Mitigation Fees

Revised Draft - 6/20/91

RAE = Residential Acre Equivalent

Land Use Category	Total Fee per Acre	Water RAE	Water Fee/Acre	Sewer RAE	Sewer Fee/Acre	Storm Drainage RAE	Storm Drainage Fee/Acre	Streets RAE	Streets Fee/Acre
Residential									
Low Density	$39,160	1.00	$5,500	1.00	$1,080	1.00	$7,380	1.00	$5,380
Medium Density	$59,820	1.96	$10,780	1.96	$2,120	1.00	$7,380	1.96	$10,540
High Density	$105,200	3.49	$19,200	3.49	$3,770	1.00	$7,380	3.05	$16,410
East Side Residential	$41,130	1.00	$5,500	1.00	$1,080	1.00	$7,380	1.00	$5,380
Planned Low Density	$39,160	1.00	$5,500	1.00	$1,080	1.00	$7,380	1.00	$5,380
Planned Med. Density	$59,820	1.96	$10,780	1.96	$2,120	1.00	$7,380	1.96	$10,540
Planned High Density	$105,200	3.49	$19,200	3.49	$3,770	1.00	$7,380	3.05	$16,410
Commercial									
Neighborhood	$40,280	0.64	$3,520	0.94	$1,020	1.33	$9,820	1.90	$10,220
General	$48,270	0.64	$3,520	0.94	$1,020	1.33	$9,820	3.82	$20,550
Downtown	$40,280	0.64	$3,520	0.94	$1,020	1.33	$9,820	1.90	$10,220
Office	$53,530	0.64	$3,520	0.94	$1,020	1.33	$9,820	3.27	$17,590
Industrial									
Light	$29,930	0.26	$1,430	0.42	$450	1.33	$9,820	2.00	$10,760
Heavy	$28,870	0.26	$1,430	0.42	$450	1.33	$9,820	1.27	$6,830

		Police RAE	Police Fee/Acre	Fire RAE	Fire Fee/Acre	Parks & Recreation RAE	Parks & Recreation Fee/Acre	General City RAE	General City Fee/Acre
Residential									
Low Density		1.00	$1,130	1.00	$510	1.00	$11,810	1.00	$6,370
Medium Density		1.77	$2,000	1.96	$1,000	1.43	$16,890	1.43	$9,110
High Density		4.72	$5,330	4.32	$2,200	2.80	$33,070	2.80	$17,840
East Side Residential		1.09	$1,230	1.10	$560	1.10	$12,990	1.10	$7,010
Planned Low Density		1.00	$1,130	1.00	$510	1.00	$11,810	1.00	$6,370
Planned Med. Density		1.77	$2,000	1.96	$1,000	1.43	$16,890	1.43	$9,110
Planned High Density		4.72	$5,330	4.32	$2,200	2.80	$33,070	2.80	$17,840
Commercial									
Neighborhood		4.28	$4,840	2.77	$1,410	0.32	$3,780	0.89	$5,670
General		2.59	$2,930	1.93	$980	0.32	$3,780	0.89	$5,670
Downtown		4.28	$4,840	2.77	$1,410	0.32	$3,780	0.89	$5,670
Office		3.72	$4,200	2.46	$1,250	0.54	$6,380	1.53	$9,750
Industrial									
Light		0.30	$340	0.64	$330	0.23	$2,720	0.64	$4,080
Heavy		0.19	$210	0.61	$310	0.33	$3,900	0.93	$5,920

See Note 4.

Reference: LMC §15.64.xxx & Resolution 91-xxx

Notes

1. This schedule is a summary only; refer to the reference cited for details of applicability and interpretations.
2. LMC = Lodi Municipal Code; PWD = Public Works Department
3. Fees must be paid before work is scheduled or applicable Map/Permit issued.
4. Special area assessments or charges required by reimbursement agreements are not included in this summary.

Approved: Jack L. Ronsko, Public Works Director Date

MEMORANDUM, City of Lodi, Public Works Department

TO: City Manager
City Council
Planning Commission
City Department Heads
Interested Parties

FROM: Public Works Director

DATE: April 16, 1991

SUBJECT: Development Impact Fee Study

As part of the General Plan update, the City retained the firms of Nolte and Associates and Angus McDonald and Associates to prepare a comprehensive study of costs and financing mechanisms for the major capital improvements needed to support the growth shown in the General Plan. The goal is to provide needed capital improvements meeting City service standards in a timely fashion.

The long-awaited public draft of this study is attached for your review and comment. The study recommends eight categories (Water, Sewer, Storm Drainage, Streets, Police, Fire, Parks/ Recreation, and General City Facilities) of infrastructure fees based on the General Plan land use designations. Table 2-2 summarizes these acreage fees.

An informal public meeting has been set for Tuesday, April 30, at 1:30 p.m., in the Carnegie Forum, 305 West Pine Street, to review and discuss the draft study. The consultants and City staff will make a short presentation and be available for questions. Subsequent work sessions and public hearings will be held with the City Council. Should you have any questions or comments in the meantime or not be able to attend the meeting, you are welcome to contact Richard Prima or me at City Hall at 333-6706.

Jack L. Ronsko
Public Works Director

JLR/RCP/mt

Attachment

cc: Nolte and Associates
McDonald and Associates